

# Service Manual

ORDER NO.  
**ARP3127**

PLASMA DISPLAY

# PRO-800HD

**THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).**

Type	Model	Power Requirement	Remarks
	PRO-800HD		
LUXC/CA	○	AC120V	

- This service manual should be used together with the following manual(s).

Model No.	Order No.	Remarks
PDP-433CMX	ARP3123	EXPLODED VIEWS AND PARTS LIST, BLOCK DIAGRAM, PCB PARTS LIST, ADJUSTMENT, DIAGNOSIS, IC INFORMATION, etc.
PDA-5002 (VIDEO CARD)	ARP3093	VIDEO CARD (EXPLODED VIEWS AND PARTS LIST, BLOCK DIAGRAM, PCB PARTS LIST, ADJUSTMENT, DIAGNOSIS, IC INFORMATION, etc.)

# 1. CONTRAST OF MISCELLANEOUS PARTS

NOTES: ● Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.

- The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Screws adjacent to  $\nabla$  mark on product are used for disassembly.
- Reference Nos. indicate the pages and Nos. in the service manual for the base model.
- For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560  $\Omega$   $\rightarrow$   $56 \times 10^1$   $\rightarrow$  561 ..... RD1/4PU  $\begin{bmatrix} 5 \\ 6 \end{bmatrix} \begin{bmatrix} 1 \\ 1 \end{bmatrix} J$   
 47k  $\Omega$   $\rightarrow$   $47 \times 10^3$   $\rightarrow$  473 ..... RD1/4PU  $\begin{bmatrix} 4 \\ 7 \end{bmatrix} \begin{bmatrix} 3 \\ 3 \end{bmatrix} J$   
 0.5  $\Omega$   $\rightarrow$  R50 ..... RN2H  $\begin{bmatrix} R \\ 5 \end{bmatrix} \begin{bmatrix} 0 \\ 0 \end{bmatrix} K$   
 1  $\Omega$   $\rightarrow$  1R0 ..... RS1P  $\begin{bmatrix} 1 \\ R \end{bmatrix} \begin{bmatrix} 0 \\ 0 \end{bmatrix} K$

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k  $\Omega$   $\rightarrow$   $562 \times 10^1$   $\rightarrow$  5621 ..... RN1/4PC  $\begin{bmatrix} 5 \\ 6 \end{bmatrix} \begin{bmatrix} 2 \\ 1 \end{bmatrix} F$

## ■ CONTRAST TABLE

PRO-800HD/LUXC/CA and PDP-433CMX/LUCBW are constructed the same except for the following:

Ref. No.	Mark	Symbol and Description	Part No.		Remarks
			PDP-433CMX/LUCBW	PRO-800HD/LUXC/CA	
		VIDEO SLOT ST1 ASSY	AWV1906	Not used	
	NSP	PRO-1000CKD ASSY	Not used	AWU1041	
		— VIDEO SLOT US ASSY	Not used	AWV1907	
		— Terminal Label PRO	Not used	AAX2848	
		— Screw	Not used	ABA1300	
		— Remote Control Unit	Not used	AXD1466	
	NSP	— Warranty Sheet	Not used	ARY1026	
		— Packing Case	Not used	AHD3106	
		— Sheet	Not used	AHG1323	
		Operating Instructions (English)	Not used	ARB1548	
		PACKING CASE, TRAY	Not used	UAHD3153	
		PACKING CASE TOP	Not used	UAHD3154	
		END PAD A	Not used	UAHA2288	
		END PAD B	Not used	UAHA2289	
		POLY BAG FOR WARRANTY	Not used	UAHG1285	
		MODEL LABEL	Not used	UAA12411	
		EXTRUSION TOP	Not used	UAMB2748	
		EXTRUSION RIGHT	Not used	UAMB2749	
		WITH CUTOFF WINDOW			
		EXTRUSION LEFT	Not used	UAMB2750	
		EXTRUSION BOTTOM WITH	Not used	UAMB2751	
		PIONEER+ELITE SILK SCREEN			
		L JOINT BOTTOM PLATE	Not used	UANG2502	
		L JOINT TOP PLATE (TAPPED)	Not used	UANG2503	
		WITH SCREW			
		FRONT L JOINT PLATE ( SMALL )	Not used	UANG2512	
		SPACER PAD A	Not used	UAMR3293	
		FOR SIDE WINDOW C SHAPE			
		SPACER PAD B	Not used	UAMR3301	
		FOR SIDE WINDOW I SHAPE			
		LENS FOR IR WINDOW	Not used	UAMR3295	
		LENS FOR LED	Not used	UAMR3296	
		WITH DOUBLE SIDED TAPE			
		FRAME MOUNTING L BRACKET TOP	Not used	UANG2528	
		FRAME MOUNTING L BRACKET	Not used	UANG2529	
		BOTTOM			
		SCREW #8 1/2 PPH T-AB BLK	Not used	UABA1304	
		FOR BRACKET/EXTRUSION			
		SCREW M8 x 15mm PBH BLK	Not used	UABA1305	
		FOR BRACKET/PDP			

● Video card PDA-5002/BDK/WL of the other selling includes VIDEO SLOT ASSY AWV1906 of PDP-433CMX/LUCBW.

● For PCB assemblies, Refer to "CONTRAST OF PCB ASSEMBLIES".

## ■ CONTRAST OF PCB ASSEMBLIES

### VIDEO SLOT ASSY

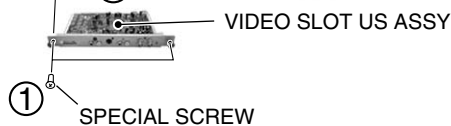
AWV1907 and AWV1906 are constructed the same except for the following:

Mark	Symbol and Description	Part No.		Remarks
		AWV1906	AWV1907	
	IC7102 IC7105 IC7401 IC7402- IC7408 IC7409	CXD2064Q ML6428CS-1 TFP201A TC74LCX541FT 24LCS21A	Not used Not used Not used Not used Not used	
	IC7410 IC7503 Q7101, Q7106 Q7102 Q7107	TC7WH04FU PQ3DZ13 2SC2412K HN1B04FU HN1A01FU	Not used Not used Not used Not used Not used	
	Q7108, Q7109 D7102, D7103 D7401 D7402, D7404 D7403	2SA1037K 1SS355 1SS184 1SS226 RD6.8MB	Not used Not used Not used Not used Not used	
	L7101 L7102, L7103 F7505- F7508, F7510- F7512 C7101, C7116 C7102	LCYA470J2520 LCYA270J2520 ATF1194 CEAT220M50 CCSRCH560J50	Not used Not used Not used Not used Not used	
	C7107 C7108 C7110, C7133 C7111, C7112, C7117, C7118 C7120- C7122, C7124- C7128, C7132	CCSRCH220J50 CCSRCH470J50 CEAT221M16 CKSRYF104Z16 CKSRYF104Z16	Not used Not used Not used Not used Not used	
	C7401, C7402, C7404, C7405, C7407 C7409, C7411, C7412, C7415, C7416 C7418, C7419, C7422- C7424 C7429- C7431, C7433 C7435- C7438, C7517, C7519, C7522	CKSRYF104Z16 CKSRYF104Z16 CKSRYF104Z16 CKSRYF104Z16 CKSRYF104Z16	Not used Not used Not used Not used Not used	
	C7523, C7525, C7529, C7531, C7533 C7535 C7113 C7114 C7130, C7318, C7320	CKSRYF104Z16 CKSRYF104Z16 CKSRYB223K50 CCSRCH102J50 CKSQYB105K10	Not used Not used Not used Not used Not used	
	C7131, C7319 C7321 C7403 C7406, C7408, C7410, C7413, C7414 C7417, C7420, C7421, C7425- C7428	CKSRYB104K16 CKSRYB104K16 CEAT470M10 CCSRCH101J50 CCSRCH101J50	Not used Not used Not used Not used Not used	
	C7432, C7434 C7520, C7524, C7526, C7530, C7532 C7534, C7536 R7100, R7124, R7139, R7144, R7145 R7167- R7170, R7181, R7310, R7451	CCSRCH101J50 CEAT470M25 CEAT470M25 RS1/16S0R0J RS1/16S0R0J	Not used Not used Not used Not used Not used	
	R7200 R7101, R7146, R7147, R7162, R7403 R7410, R7455, R7456 R7102, R7118, R7134, R7137 R7103, R7104, R7116, R7119, R7138	Not used RS1/16S103J RS1/16S103J RS1/16S560J RS1/16S102J	RS1/16S0R0J Not used Not used Not used Not used	
	R7172, R7175, R7177 R7113 R7114 R7115 R7117	RS1/16S102J RS1/16S223J RS1/16S222J RS1/16S821J RS1/16S104J	Not used Not used Not used Not used Not used	

A

Mark	Symbol and Description	Part No.		Remarks
		VWV1906	VWV1907	
B	R7127	RS1/16S561J	Not used	
	R7128	RS1/16S563J	Not used	
	R7133, R7156, R7157, R7166, R7404	RS1/16S101J	Not used	
	R7405, R7431	RS1/16S101J	Not used	
	R7135	RS1/16S471J	Not used	
	R7136	RS1/16S121J	Not used	
	R7143	RS1/16S681J	Not used	
	R7151, R7153	RS1/16S3300F	Not used	
	R7152	RS1/16S5600F	Not used	
	R7154	RS1/16S4700F	Not used	
C	R7155	RS1/16S7501F	Not used	
	R7164	RS1/16S3001F	Not used	
	R7165	RS1/16S3301F	Not used	
	R7171, R7406, R7407	RS1/16S473J	Not used	
	R7176, R7178	RS1/16S122J	Not used	
	R7179	RS1/16S112J	Not used	
	R7401, R7402, R7408, R7409	RAB4C680J	Not used	
	R7413- R7416, R7423, R7429, R7432	RAB4C680J	Not used	
	R7438	RAB4C680J	Not used	
	R7411, R7420- R7422, R7426, R7428	RS1/16S332J	Not used	
D	R7437	RS1/16S332J	Not used	
	R7412	RAB4C220J	Not used	
	R7417, R7418	RN1/16SE1001D	Not used	
	R7435	RS1/16S823J	RS1/16S223J	
	R7442, R7444- R7446, R7452- R7454	RS1/16S470J	Not used	
	R7516	RS1MMF1R0J	Not used	
	CN7402	AKP1216	Not used	
	K7101, K7102 TEST PIN	AKX9002	Not used	
	NSP VIDEO TERMINAL PANEL	ANG2461	Not used	
	VIDEO TERMINAL PANEL	Not used	ANG2462	
D	HEXAGON HEAD SCREW	BBA1051	Not used	
	SCREW	ABA1295	Not used	
	SCREW	Not used	AMZ30P060FZK	

## 2. DISASSEMBLY OF THE VIDEO SLOT US ASSY



- ① Remove two SPECIAL SCREWS.  
[Torx driver : GGK1066]
- ② Remove the VIDEO SLOT US ASSY.



# 3. SERVICE FACTORY MODE

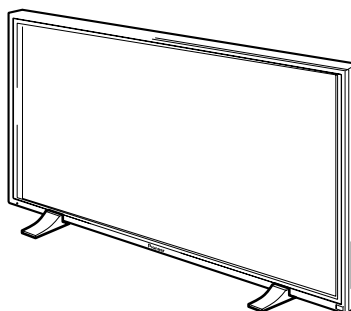
Input Signal Mode (PC) is different from PRO-800HD in PDP-433CMX.

● Classification 2 of Input Signal Mode (PC)

SIG Mode	Signal Type	OSD Display	V. Frequency v (Hz)	H. Frequency h (Hz)	IC#30 Capture Pixel Number	Display Pixel Number	Dot Clock (MHz)	Remarks	IC#30FRC Block Processing Mode
20•2	640 × 400	FULL	56	24.8	1280 × 400	1024 × 768	42.09	* FULL Display only	FRC (free-running) mode
23•2	640 × 400	FULL	70	31.5	640 × 400	1024 × 768	25.20	* FULL Display only	FRC (free-running) mode
31•0 31•1 31•2	640 × 480	DOT BY DOT 4 : 3 FULL	60	31.5	640 × 480	640 × 480 768 × 768 1024 × 768	25.18		FRC (free-running) mode
32•0 32•1 32•2	640 × 480	DOT BY DOT 4 : 3 FULL	66	35.0	640 × 480	640 × 480 768 × 768 1024 × 768	30.24		FRC (free-running) mode
34•0 34•1 34•2	640 × 480	DOT BY DOT 4 : 3 FULL	72	37.9	640 × 480	640 × 480 768 × 768 1024 × 768	31.50		FRC (free-running) mode
35•0 35•1 35•2	640 × 480	DOT BY DOT 4 : 3 FULL	75	37.5	640 × 480	640 × 480 768 × 768 1024 × 768	31.50		FRC (free-running) mode
36•0 36•1 36•2	640 × 480	DOT BY DOT 4 : 3 FULL	85	43.3	640 × 480	640 × 480 768 × 768 1024 × 768	36.03		FRC (free-running) mode
40•4 40•1 40•2	800 × 600	DOT BY DOT 4 : 3 FULL	56	35.2	800 × 600	800 × 600 768 × 768 1024 × 768	36.00		FRC (free-running) mode
41•0 41•1 41•2	800 × 600	DOT BY DOT 4 : 3 FULL	60	37.9	800 × 600	800 × 600 768 × 768 1024 × 768	40.00		FRC (free-running) mode
44•0 44•1 44•2	800 × 600	DOT BY DOT 4 : 3 FULL	72	48.1	800 × 600	800 × 600 768 × 768 1024 × 768	50.00		FRC (free-running) mode
45•0 45•1 45•2	800 × 600	DOT BY DOT 4 : 3 FULL	75	46.9	800 × 600	800 × 600 768 × 768 1024 × 768	49.51		FRC (free-running) mode
46•0 46•1 46•2	800 × 600	DOT BY DOT 4 : 3 FULL	85	53.7	800 × 600	800 × 600 768 × 768 1024 × 768	56.28		FRC (free-running) mode
55•0 55•1 55•2	832 × 624	DOT BY DOT 4 : 3 FULL	75	49.7	832 × 624	832 × 624 768 × 768 1024 × 768	57.28		FRC (free-running) mode
61•1 61•2	1024 × 768	DOT BY DOT 4 : 3	60	48.4	1024 × 768	1024 × 768 768 × 768	65.00		FRC (free-running) mode
63•1 63•2	1024 × 768	DOT BY DOT 4 : 3	70	56.5	1024 × 768	1024 × 768 768 × 768	75.01		FRC (free-running) mode
65•1 65•2	1024 × 768	DOT BY DOT 4 : 3	75	60.0	1024 × 768	1024 × 768 768 × 768	78.75		FRC (free-running) mode
66•1 66•2	1024 × 768	DOT BY DOT 4 : 3	85	68.7	1024 × 768	1024 × 768 768 × 768	94.53		FRC (free-running) mode
70•2	1280 × 768	FULL	56	45.1	1280 × 768	1024 × 768	76.13		FRC (free-running) mode
71•2	1280 × 768 *1	FULL	60	48.1	1280 × 768	1024 × 768	81.25		FRC (free-running) mode
73•2	1280 × 768 *2	FULL	70	56.1	1280 × 768	1024 × 768	93.75		FRC (free-running) mode
E1•1 E1•2	852 × 480	DOT BY DOT FULL	60	31.7	852 × 480	852 × 480 1024 × 768	34.10		FRC (free-running) mode

\* These are converted into 70Hz at the time of FRC (free-running) mode.

# Service Manual



ORDER NO.  
**ARP3123**

PLASMA DISPLAY

# PDP-433CMX PDP-433MXE

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model		Power Requirement	Remarks
	PDP-433CMX	PDP-433MXE		
LUCBW	○	—	AC100 - 120V	
YVLDK	—	○	AC100 - 240V	

● This Service Manual should be used together with the following manual(s).

Model No.	Order No.	Remarks
PDA-5002 (VIDEO CARD)	ARP3093	VIDEO CARD (EXPLODED VIEWS AND PARTS LIST, BLOCK DIAGRAM, PCB PARTS LIST, IC INFORMATION, ADJUSTMENT, DIAGNOSIS, etc.)



For details, refer to "Important symbols for good services".

## SAFETY INFORMATION



**This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.**

**Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.**

### WARNING

**This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.**

**Health & Safety Code Section 25249.6 – Proposition 65**

### NOTICE



(FOR CANADIAN MODEL ONLY)

Fuse symbols (fast operating fuse) and/or



(slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

### REMARQUE



(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible (fusible de type rapide) et/ou de remplacement doivent avoir la même désignation.



(fusible de type lent) sur CCI indiquent que les pièces

## SAFETY PRECAUTIONS

**NOTICE :** Comply with all cautions and safety related notes located on or inside the cabinet and on the chassis.

The following precautions should be observed :

1. When service is required, even though the PDP UNIT an isolation transformer should be inserted between the power line and the set in safety before any service is performed.
2. When replacing a chassis in the set, all the protective devices must be put back in place, such as barriers, nonmetallic knobs, adjustment and compartment covershields, isolation resistor-capacitor, etc.
3. When service is required, observe the original lead dress. Extra precaution should be taken to assure correct lead dress in the high voltage circuitry area.
4. Always use the manufacture's replacement components. Especially critical components as indicated on the circuit diagram should not be replaced by other manufacture's. Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.
5. Before returning a serviced set to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the set by the manufacture has become defective, or inadvertently defeated during servicing. Therefore, the following checks should be performed for the continued protection of the customer and service technician.
6. Perform the following precautions against unwanted radiation and rise in internal temperature.
  - Always return the internal wiring to the original styling.
  - Attach parts (Gasket, Ferrite Core, Ground, Rear Cover, Shield Case etc.) surely after disassembly.

7. Perform the following precautions for the PDP panel.

- When the front case is removed, make sure nothing hits the panel face, panel corner, and panel edge (so that the glass does not break).
- Make sure that the panel vent does not break. (Check that the cover is attached.)
- Handle the FPC connected to the panel carefully. Twisting or pulling the FPC when connecting it to the connector will cause it to peel off from the panel.

8. Pay attention to the following.

- Be sure to wire the fan. If the fan does not work, the temperature will rise and cause the protection circuit to operate.
- When the front case is removed, infrared ray is radiated and may disturb reception of the remote control unit.
- Pay extreme caution when the front case and rear panel are removed because this may cause a high risk of disturbance to TVs and radios in the surrounding.

## Leakage Current Cold Check

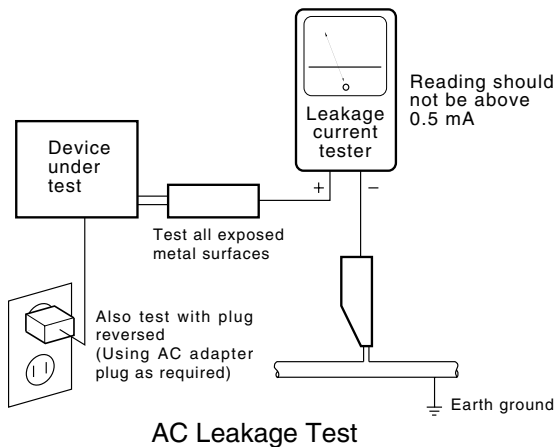
With the AC plug removed from an AC power source, place a jumper across the two plug prongs. Turn the AC power switch on. Using an insulation tester (DC 500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (input/output terminals, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistor reading of  $0.3\text{M}\Omega$  and a maximum resistor reading of  $5\text{M}\Omega$ . Any resistor value below or above this range indicates an abnormality which requires corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

## Leakage Current Hot Check

Plug the AC line cord directly into an AC power source (do not use an isolation transformer for this check).

Turn the AC power switch on.

Using a "Leakage Current Tester (Simpson Model 229 equivalent)", measure for current from all exposed metal parts of the cabinet (input/output terminals, screwheads, metal overlays, control shaft, etc.), particularly any exposed metal part having a return path to the chassis, to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed  $0.5\text{mA}$ .



**ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE SET TO THE CUSTOMER.**

## PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in PIONEER set have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚡ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

## ■ CHARGED SECTION AND HIGH VOLTAGE GENERATING POINT

### ■ Charged Section

The places where the commercial AC power is used without passing through the power supply transformer.

If the places are touched, there is a risk of electric shock. In addition, the measuring equipment can be damaged if it is connected to the GND of the charged section and the GND of the non-charged section while connecting the set directly to the commercial AC power supply. Therefore, be sure to connect the set via an insulated transformer and supply the current.

1. AC Power Cord
2. AC Inlet with Filter
3. Power Switch (S1)
4. Fuse (In the SW POWER SUPPLY Module)
5. STB Transformer and Converter Transformer  
(In the SW POWER SUPPLY Module)
6. Other primary side of the SW POWER SUPPLY Module

### ■ High Voltage Generating Point

The places where voltage is 100V or more except for the charged places described above. If the places are touched, there is a risk of electric shock.

1. SW POWER SUPPLY Module ..... (215V)
2. X DRIVE Assy ..... (-280V to 215V)
3. Y DRIVE Assy ..... (345V)
4. SCAN (A) Assy ..... (345V)
5. SCAN (B) Assy ..... (345V)
6. X CONNECTOR (A) Assy ..... (-280V to 215V)
7. X CONNECTOR (B) Assy ..... (-280V to 215V)

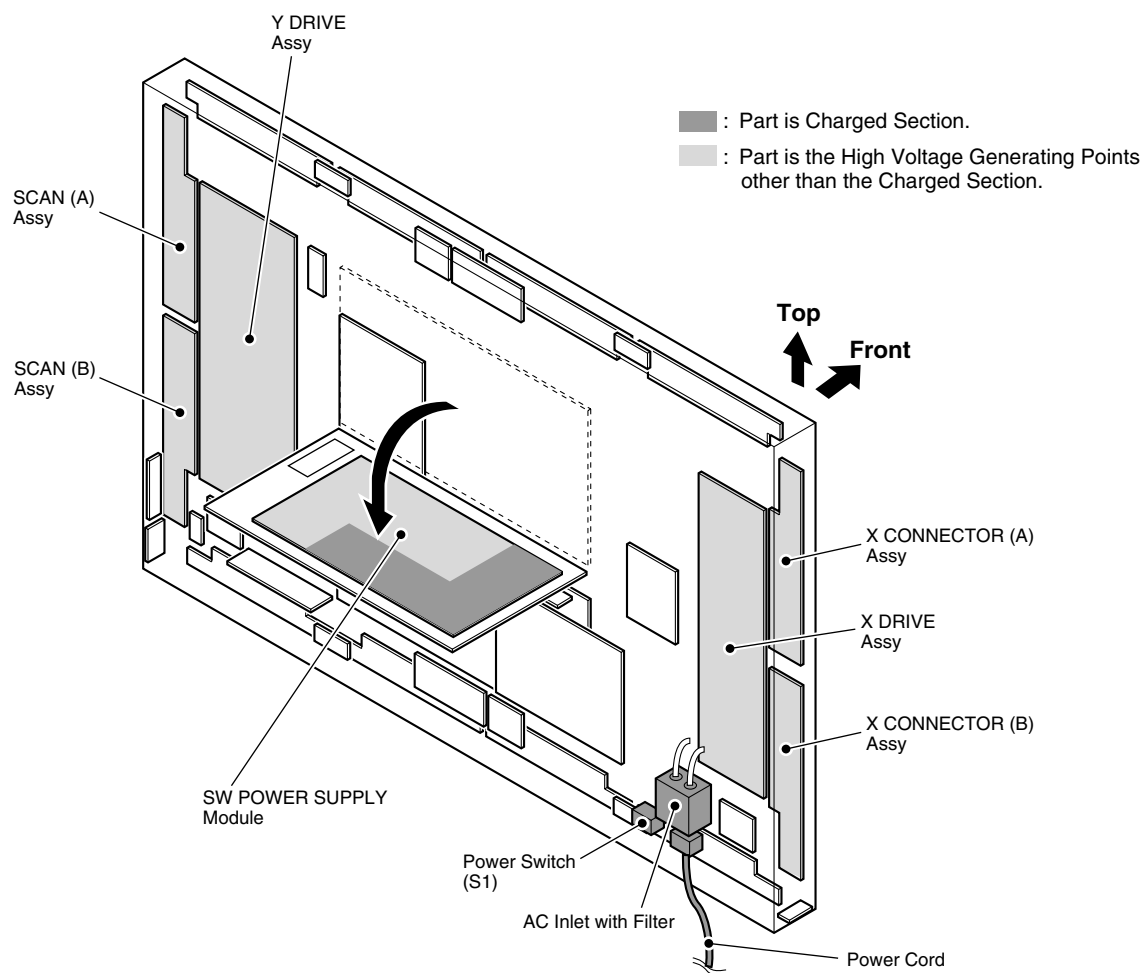


Fig.1 Charged Section and High Voltage Generating Point (Rear View)

## [ Important symbols for good services ]

In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely. When you find the procedures bearing any of the symbols, be sure to fulfill them:

### 1. Product safety



You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

### 2. Adjustments



To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

### 3. Cleaning



For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

### 4. Shipping mode and shipping screws



To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

### 5. Lubricants, glues, and replacement parts



Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount. For replacement parts or tools, the prescribed ones should be used.

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# 1. SPECIFICATIONS

## ■ PLASMA DIAPLAY (PDP-433CMX and PDP-433MXE)

### General

Light emission panel ..... 43 inch plasma display panel  
 Number of pixels ..... 1024 x 768  
 Power supply .... AC 100 - 120 V, 50/60 Hz (PDP-433CMX)  
 Power supply .... AC 100 - 240 V, 50/60 Hz (PDP-433MXE)  
 Rated current ..... 2.98 A - 2.48 A (PDP-433CMX)  
 Rated current ..... 2.98 A - 1.24 A (PDP-433MXE)  
 Standby power consumption ..... 0.9 W (PDP-433CMX)  
 Standby power consumption ..... 1 W (PDP-433MXE)  
 External dimensions ..... 1070 (W) x 630 (H) x 98 (D) mm  
 ..... 42-1/8 (W) x 24-13/16 (H) x 3-7/8 (D) in.  
 (including display stand)  
 ..... 1070 (W) x 653 (H) x 300 (D) mm  
 ..... 42-1/8 (W) x 25-23/32 (H) x 11-13/16 (D) in.  
 Weight ..... 31.5 kg (69 lbs. 7 oz)  
 (including display stand) ..... 32.1 kg (70 lbs. 12 oz)

### Input/output

#### Video

##### INPUT 1

- Input** Mini D-sub 15 pin (socket connector)  
 RGB signal (G ON SYNC compatible)  
 RGB ... 0.7 Vp-p/75  $\Omega$ /no sync.  
 HD/CS, VD ... TTL level  
 /positive and negative polarity  
 /2.2 k $\Omega$   
 G ON SYNC  
 ... 1 Vp-p/75  $\Omega$ /negative sync.  
 \*Compatible with Microsoft's Plug & Play  
 (VESA DDC1/2B)

- Output** Mini D-sub 15 pin (socket connector)  
 75  $\Omega$ /with buffer

##### INPUT 2

- Input** BNC jack (x5)  
 RGB signal (G ON SYNC compatible)  
 RGB ... 0.7 Vp-p/75  $\Omega$ /no sync.  
 HD/CS, VD ... TTL level  
 /positive and negative polarity/  
 75  $\Omega$  or 2.2 k $\Omega$   
 (impedance switch)  
 G ON SYNC ...  
 1 Vp-p/75  $\Omega$ /negative sync.

#### Audio

- Input** AUDIO INPUT (for INPUT 1/2)  
 Stereo mini jack  
 L/R ... 500mVrms/more than 10 k $\Omega$
- Output** AUDIO OUTPUT  
 Stereo mini jack  
 L/R ... 500mVrms (max)/less than 5 k $\Omega$
- SPEAKER  
 L/R ... 8 - 16  $\Omega$ /2W +2W (at 8  $\Omega$ )

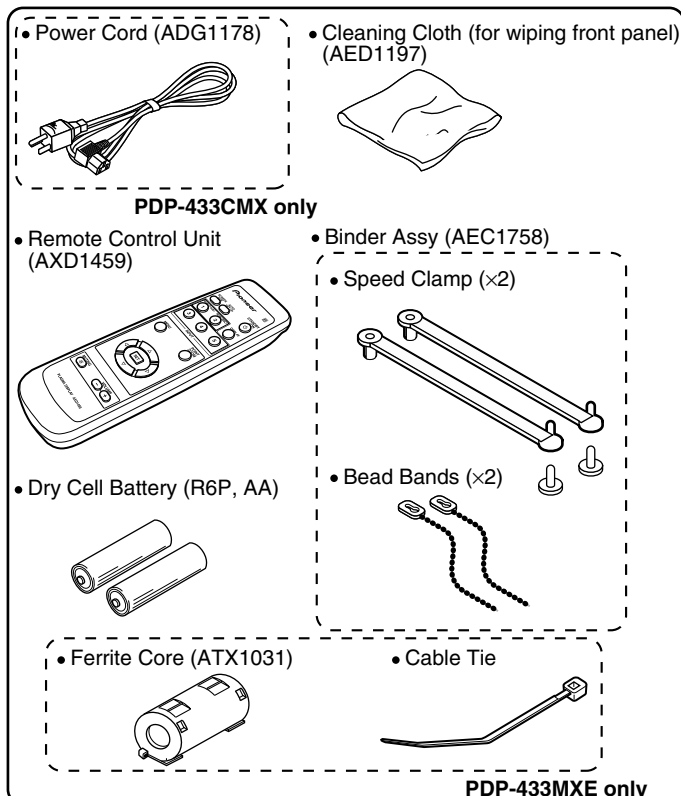
#### Control

- RS-232C ... D-sub 9 pin (pin connector)  
 COMBINATION IN/OUT  
 ... Mini DIN 6 pin (x2)  
 CONTROL IN/OUT ... monaural mini jack (x2)

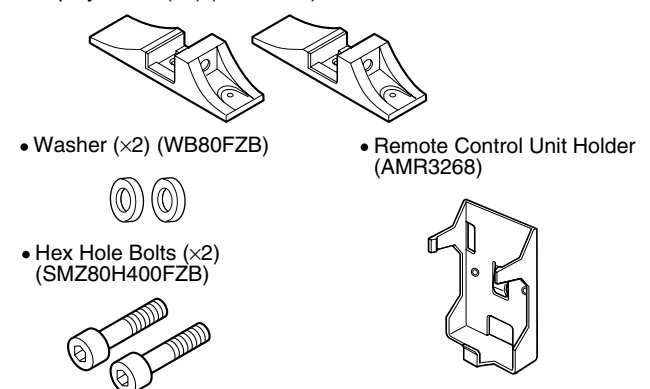
#### Accessories

- Power cord ..... 1 (PDP-433CMX Only)  
 Remote control unit ..... 1  
 Remote control unit holder ..... 1  
 AA (R6) batteries ..... 2  
 Cleaning cloth ..... 1  
 Speed clamps ..... 2  
 Bead bands ..... 2  
 Warranty ..... 1 (PDP-433CMX Only)  
 Operating Instructions ..... 1  
 Display stands ..... 2  
 Washers ..... 2  
 Hex hole bolts (M8X40) ..... 2  
 Ferrite core ..... 1 (PDP-433MXE Only)  
 Cable tie ..... 1 (PDP-433MXE Only)  
 • Due to improvements, specifications and design are subject to  
 change without notice.

### ● Accessories



### • Display Stand (x2) (AMR3264)



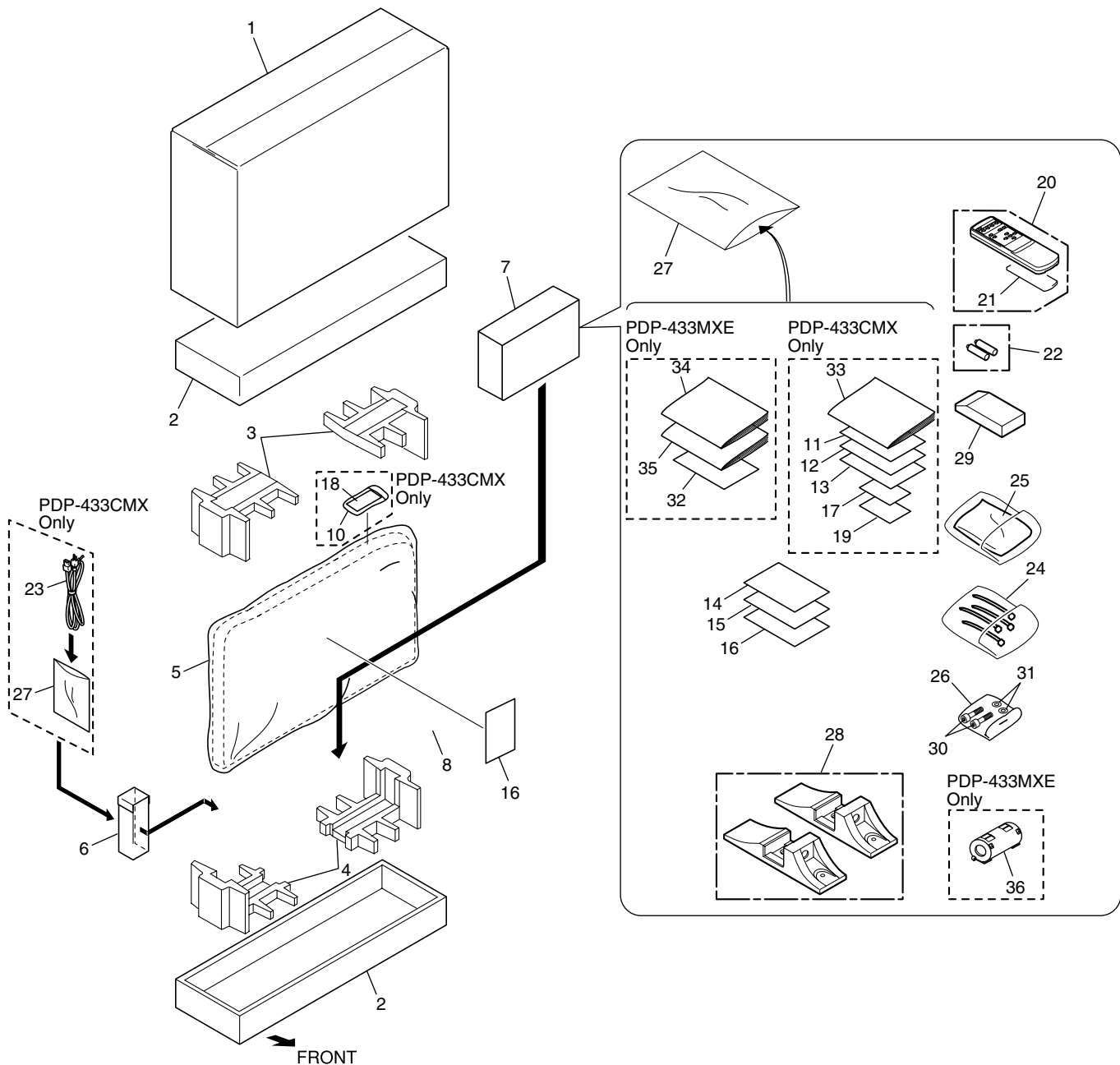


## 2. EXPLODED VIEWS AND PARTS LIST

NOTES: ● Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.

- The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Screws adjacent to  $\nabla$  mark on the product are used for disassembly.
- For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)

## 2.1 PACKING



**(1) PACKING PARTS LIST**

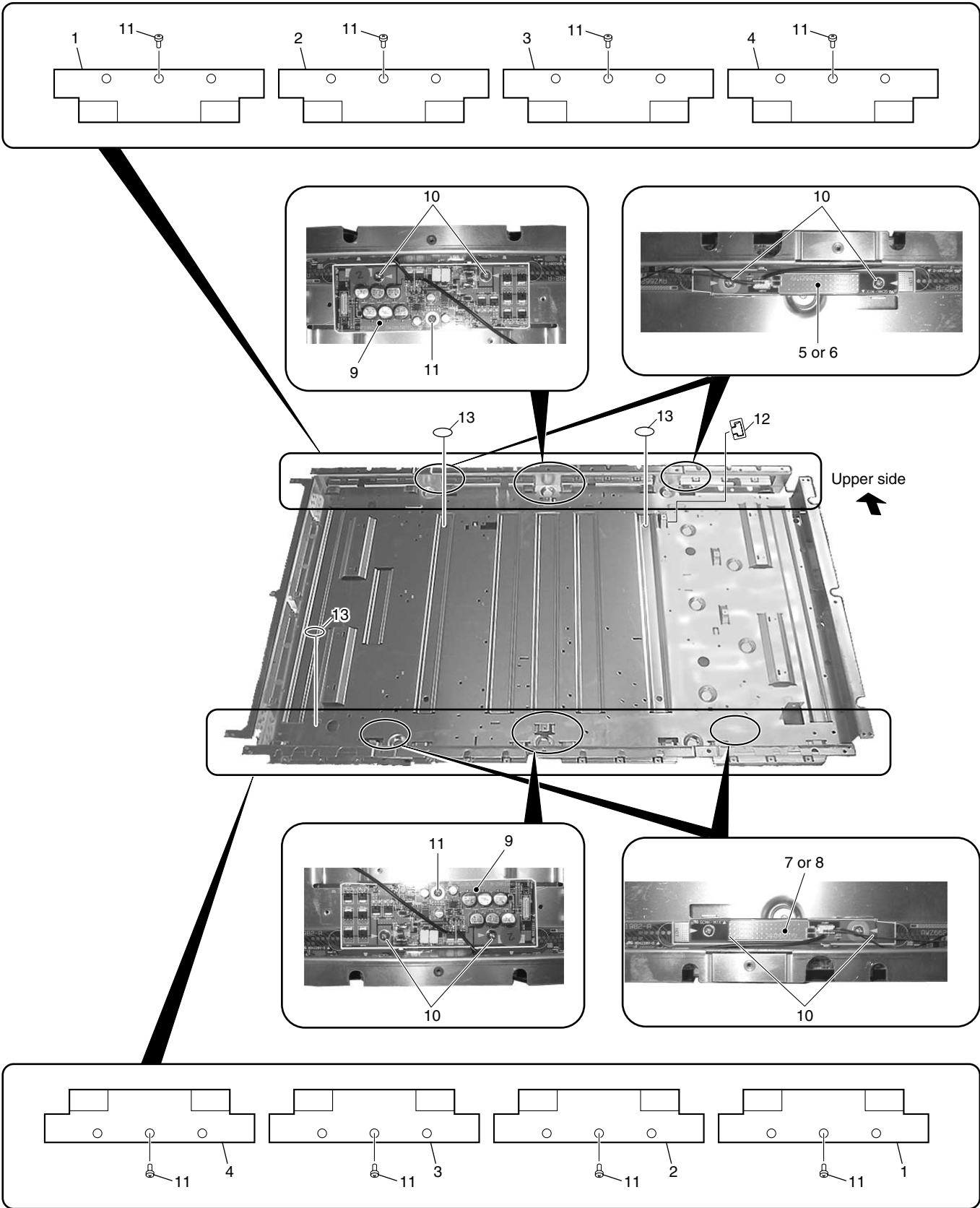
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Packing Case	See Contrast table (2)		21	Battery Cover	AZN2462
	2	Carton (43)	AHD3100	NSP	22	Dry Cell Battery (R6P, AA)	AEX1026
	3	Pad (43U)	AHA2282	△	23	Power Cord	See Contrast table (2)
	4	Pad (43L)	AHA2283		24	Binder Assy (Speed Clamp × 2, Bead Band × 2)	AEC1758
	5	Mirror Mat	AHG1284				
	6	Power Cord Case	AHC1037		25	Wiping Cloth	AED1197
	7	Accessory Case	AHC1036	NSP	26	Polyethylene Bag	AHG-064
	8	•••••			27	Vinyl Bag	AHG1310
	9	•••••			28	Display Stand	AMR3264
NSP	10	Polyethylene Bag	See Contrast table (2)		29	Remote Control Holder	AMR3268
	11	Plasma Caution Sheet	See Contrast table (2)		30	Hex Hole Bolt	SMZ80H400FZB
	12	Plasma Caution Sheet	See Contrast table (2)		31	Washer	WB80FZB
	13	Caution Sheet	See Contrast table (2)		32	Plasma Caution Sheet	See Contrast table (2)
	14	Caution Sheet	ARM1194		33	Operating Instructions (Japanese/English/French)	See Contrast table (2)
	15	Caution Sheet	ARM1200				
	16	Caution Sheet	ARM1201		34	Operating Instructions (Spanish/Italian/Dutch)	See Contrast table (2)
NSP	17	Caution Sheet	See Contrast table (2)		35	Operating Instructions (English/French/German)	See Contrast table (2)
NSP	18	Warranty Card	See Contrast table (2)				
NSP	19	Warranty Card	See Contrast table (2)		36	Ferrite Core	See Contrast table (2)
	20	Remote Control Unit	AXD1459				

**(2) CONTRAST TABLE**

PDP-433CMX/LUCB and PDP-433MXE/YVLDK are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			PDP-433CMX	PDP-433MXE	
			LUCB	YVLDK	
NSP	1	Packing Case (43CMX)	AHD3130	Not used	
	1	Packing Case (43MXE)	Not used	AHD3134	
	10	Polyethylene Bag	AHG-195	Not used	
	11	Plasma Caution Sheet	ARM1145	Not used	
	12	Plasma Caution Sheet	ARM1147	Not used	
	13	Caution Sheet	ARM1176	Not used	
NSP	17	Caution Sheet	ARM1203	Not used	
NSP	18	Warranty Card	ARY1093	Not used	
NSP	19	Warranty Card	ARY1102	Not used	
△	23	Power Cord	ADG1178	Not used	
	32	Plasma Caution Sheet	Not used	ARM1149	
	33	Operating Instructions (Japanese/English/French)	ARD1049	Not used	
	34	Operating Instructions (Spanish/Italian/Dutch)	Not used	ARC1506	
	35	Operating Instructions (English/French/German)	Not used	ARE1361	
	36	Ferrite Core	Not used	ATX1031	

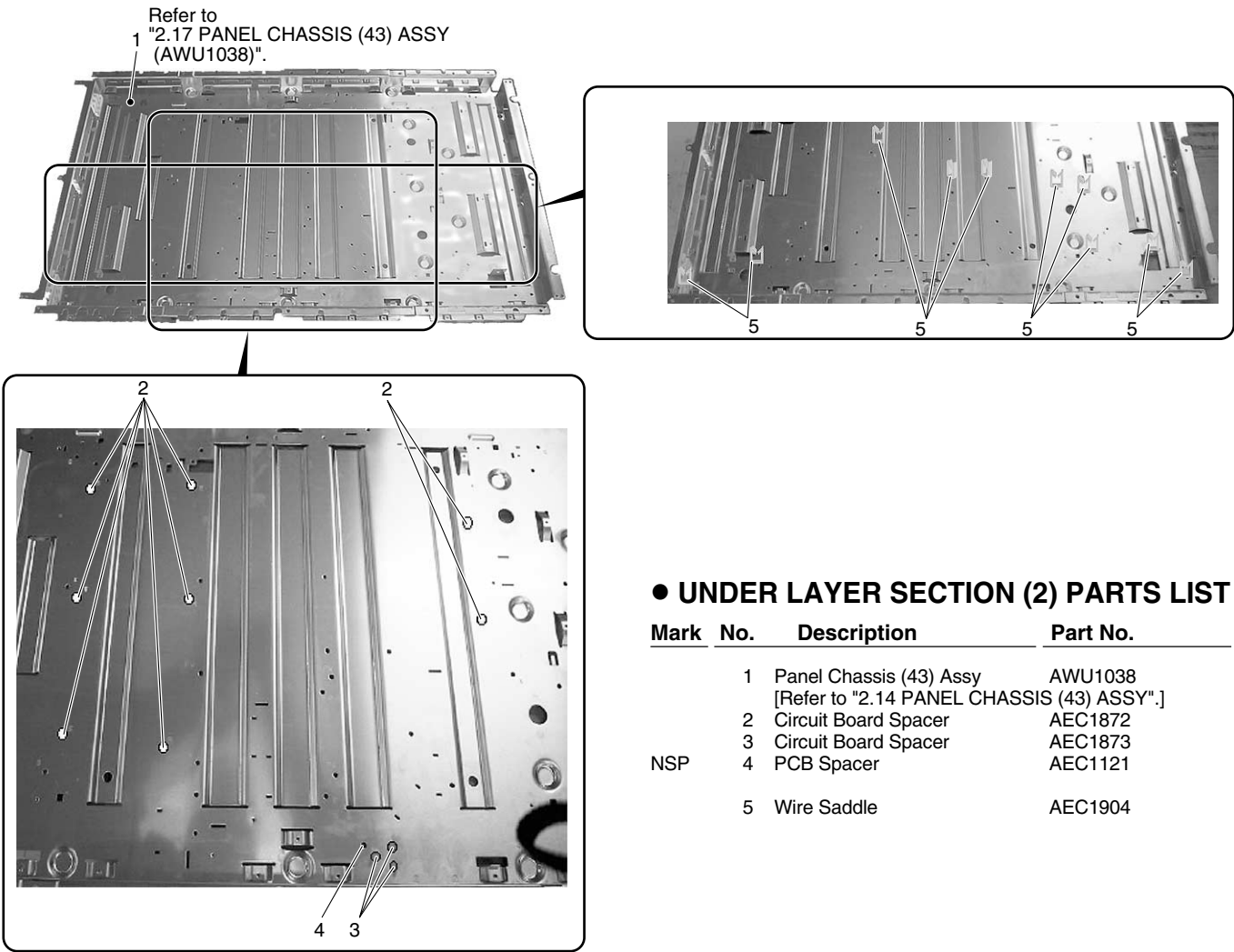
2.2 UNDER LAYER SECTION (1)



● UNDER LAYER SECTION (1) PARTS LIST

Mark	No.	Description	Part No.
NSP	1	ADR CONNECT A Assy	AWZ6678
NSP	2	ADR CONNECT B Assy	AWZ6679
NSP	3	ADR CONNECT C Assy	AWZ6680
NSP	4	ADR CONNECT D Assy	AWZ6681
NSP	5	BRIDGE A Assy	AWZ6674
NSP	6	BRIDGE B Assy	AWZ6675
NSP	7	BRIDGE C Assy	AWZ6676
NSP	8	BRIDGE D Assy	AWZ6677
NSP	9	ADR RESONANCE Assy	AWZ6682
	10	Screw	ABA1301
	11	Screw	VBB30P100FNI
	12	Shading Sheet (43)	AMR3313
	13	Rear Coner Label	AAX2862

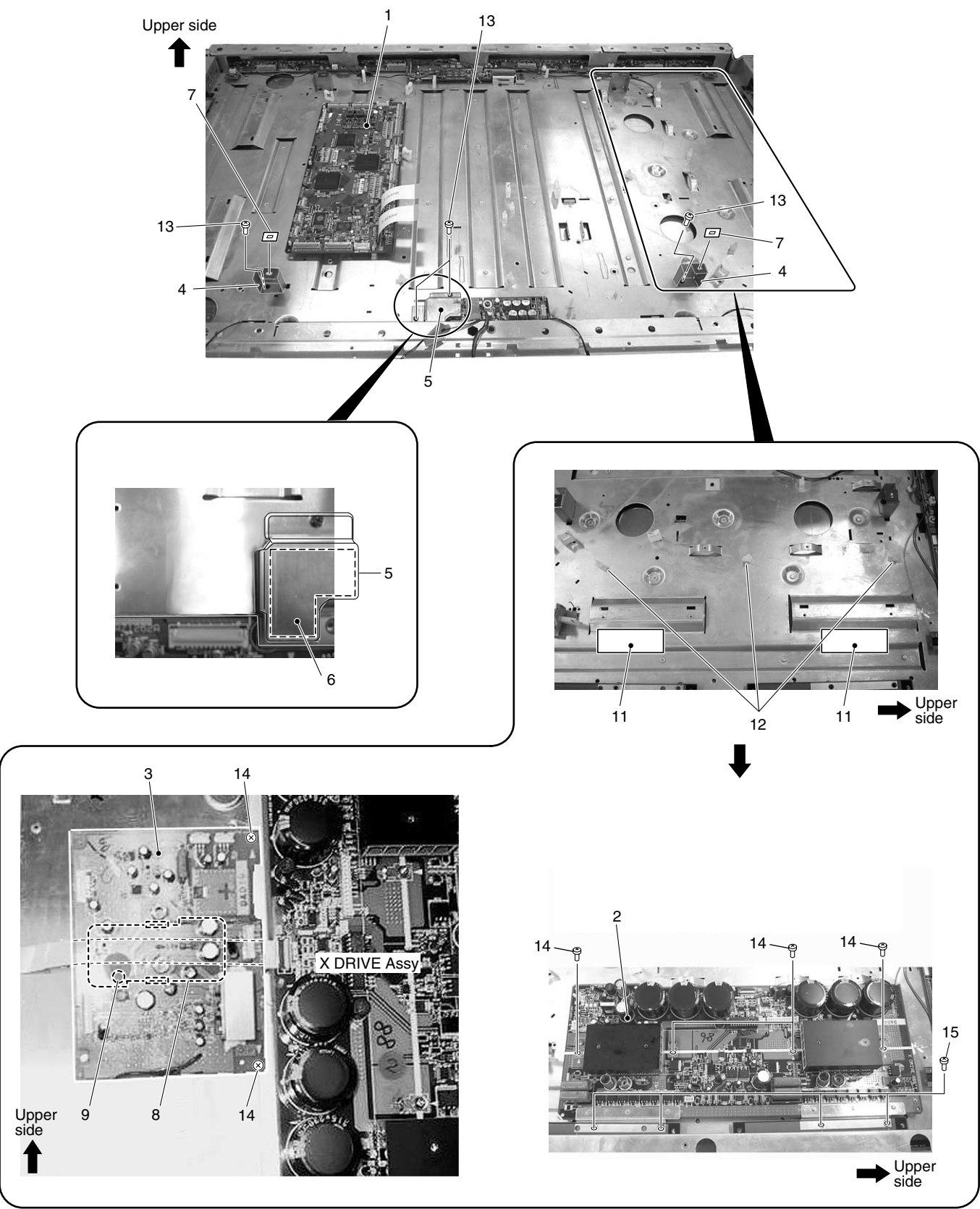
2.3 UNDER LAYER SECTION (2)



● UNDER LAYER SECTION (2) PARTS LIST

Mark	No.	Description	Part No.
	1	Panel Chassis (43) Assy [Refer to "2.14 PANEL CHASSIS (43) ASSY".]	AWU1038
	2	Circuit Board Spacer	AEC1872
	3	Circuit Board Spacer	AEC1873
NSP	4	PCB Spacer	AEC1121
	5	Wire Saddle	AEC1904

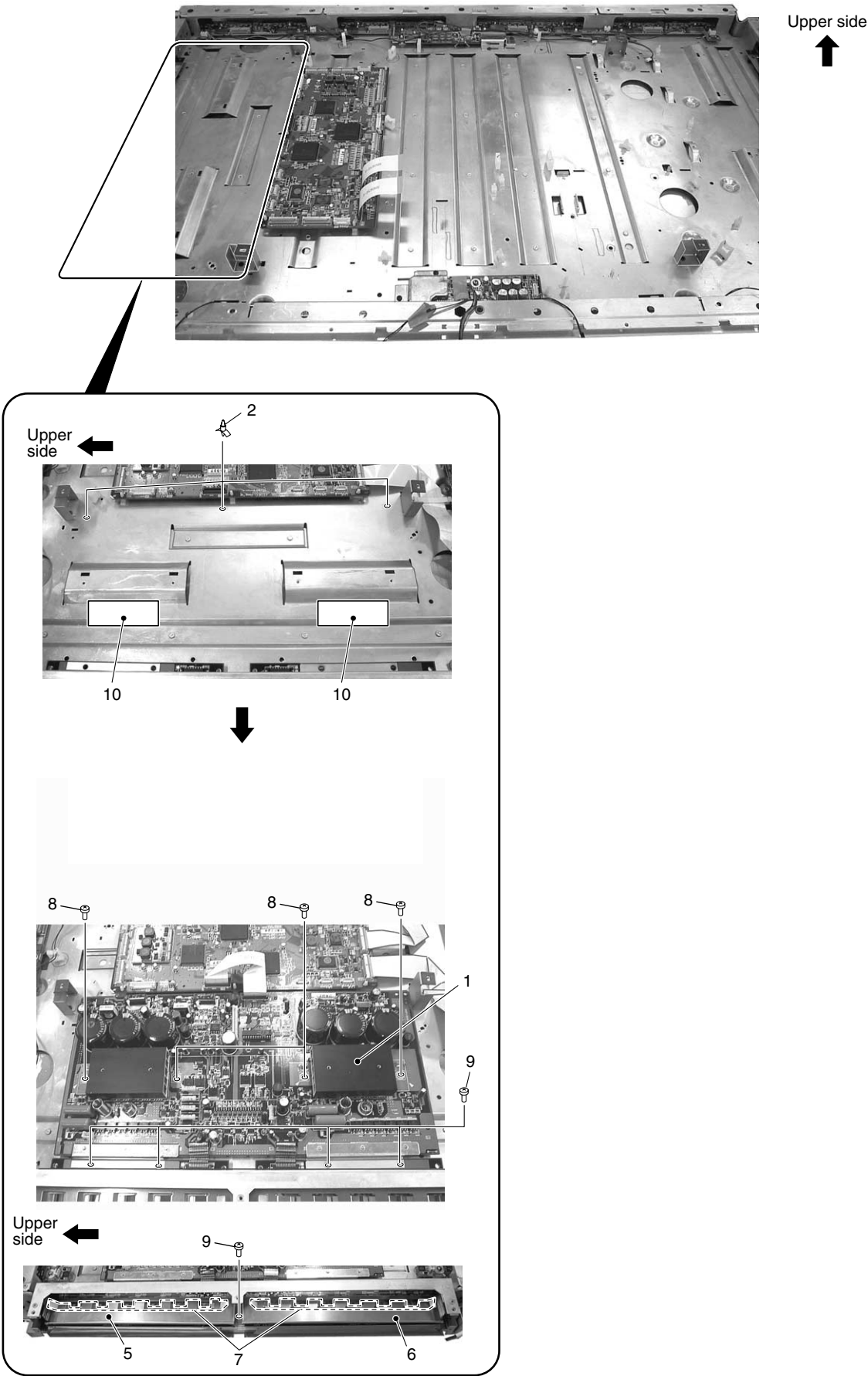
2.4 UNDER LAYER SECTION (3)



### ● UNDER LAYER SECTION (3) PARTS LIST

Mark	No.	Description	Part No.
	1	DIGITAL VIDEO Assy	AWV1941
	2	X DRIVE Assy	AWV1930
	3	MX AUDIO Assy	AWZ6644
NSP	4	Metal Fitting	ANG2464
NSP	5	Heat Sink	ANH1594
	6	Silicone Sheet	AEH1039
	7	Insulation Sheet	AMR3263
	8	Audio Sheet (43)	AMR3285
	9	Rivet	BEC1066
	10	•••••	
	11	Coil Silicone Sheet	AEH1048
	12	Circuit Board Spacer	AEC1872
	13	Screw	ABZ30P060FMC
	14	Screw	VBB30P100FNI
	15	Screw	PMB30P060FNI

2.5 UNDER LAYER SECTION (4)

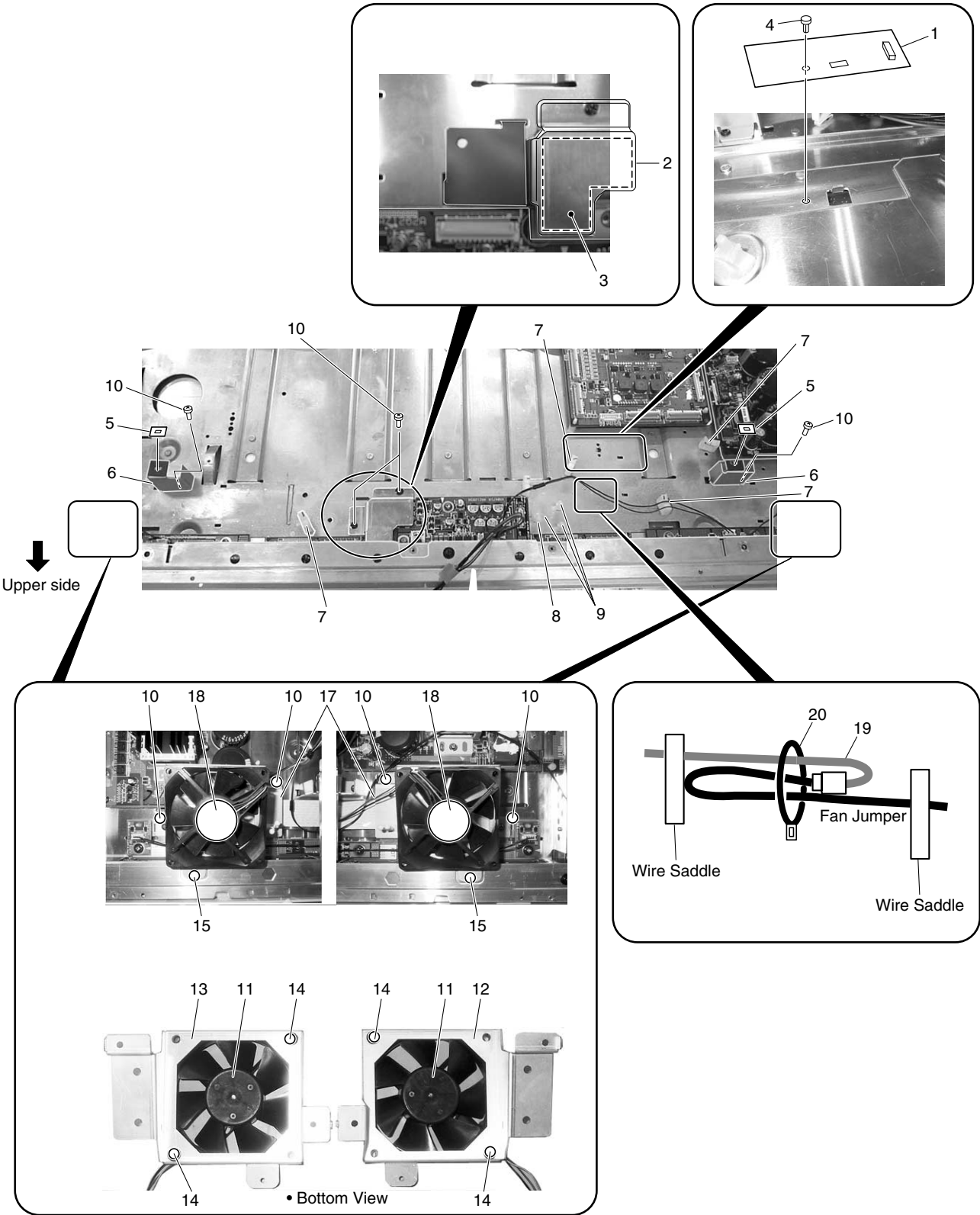


● UNDER LAYER SECTION (4) PARTS LIST

Mark	No.	Description	Part No.
	1	Y DRIVE Assy	AWZ6683
	2	Circuit Board Spacer	AEC1872
	3	.....	
	4	.....	
	5	Scan IC Spring (43L)	ABK1029
	6	Scan IC Spring (43R)	ABK1030
	7	Scan Insulation Sheet (43)	AMR3287
	8	Screw	VBB30P100FNI
	9	Screw	PMB30P060FNI
	10	Coil Silicone Sheet	AEH1048



2.6 UNDER LAYER SECTION (5)



# ● UNDER LAYER SECTION (5) PARTS LIST

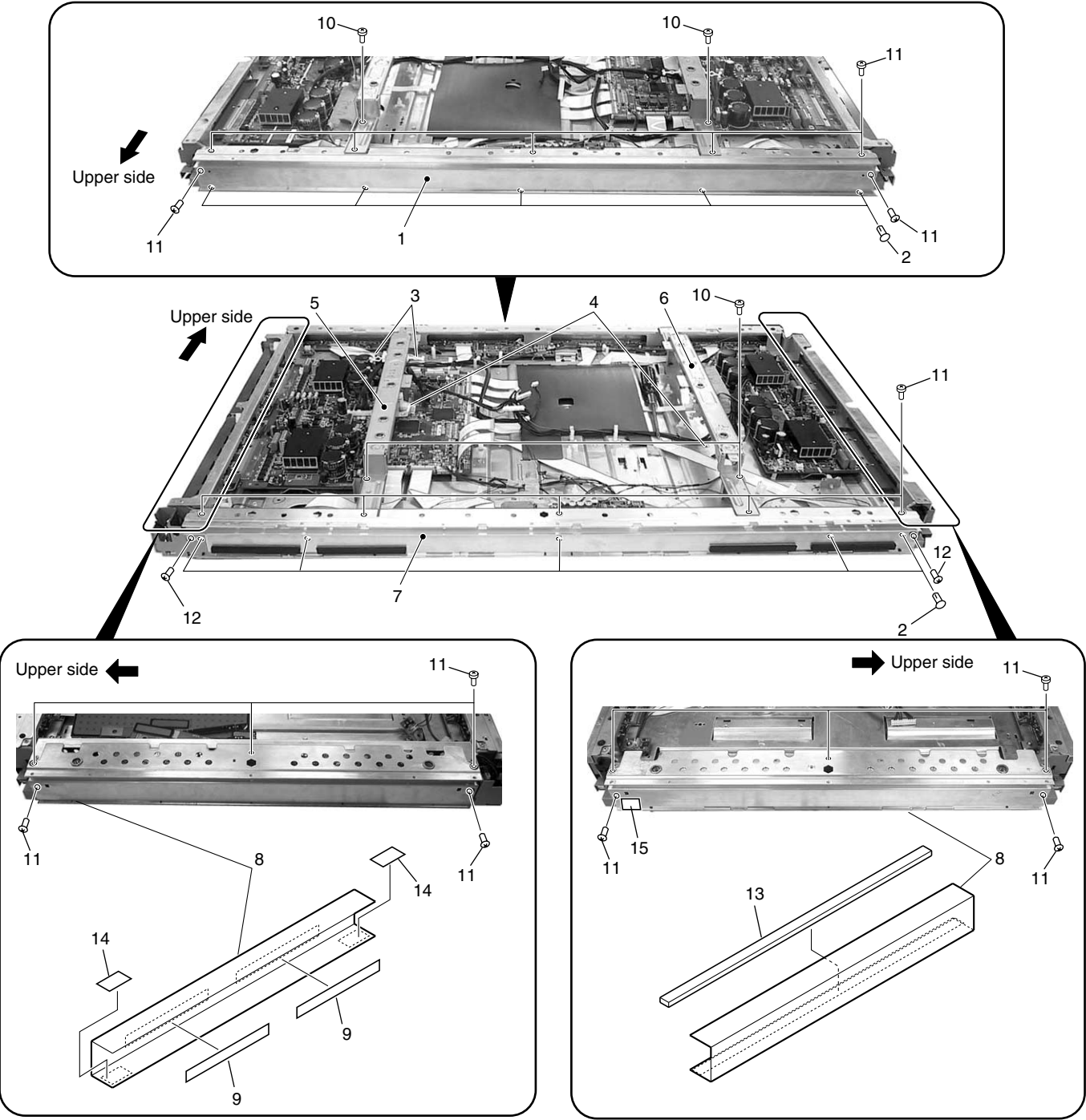
Mark	No.	Description	Part No.
NSP	1	THERMAL SENSOR Assy	AWZ6639
	2	Heat Sink	ANH1594
	3	Silicone Sheet	AEH1039
	4	Rivet	BEC1066
	5	Insulation Sheet	AMR3263
NSP	6	Metal Fitting	ANG2464
	7	Wire Saddle	AEC1904
NSP	8	PCB Spacer	AEC1121
	9	Circuit Board Spacer	AEC1873
	10	Screw	ABZ30P060FMC
	11	Fan Motor	AXM1040
NSP	12	Fan Metal (L)	ANG2488
NSP	13	Fan Metal (R)	ANG2489
	14	Screw	PPZ50P100FZK
	15	Screw	BMZ30P060FZK
	16	•••••	
	17	Niplocker	AEC1803
	18	Fan Label	AAX2785
	19	J115 3P Housing Wire	ADX2780
	20	Binder	AEC-093



## ● UNDER LAYER SECTION (6) PARTS LIST

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
NSP	1	ADR CONNECT A Assy	AWZ6678		26	J202 Flexible Flat Cable	ADD1183
NSP	2	ADR CONNECT B Assy	AWZ6679		27	Flat Clamp	AEC1879
NSP	3	ADR CONNECT C Assy	AWZ6680		28	J203 Flexible Flat Cable	ADD1198
NSP	4	ADR CONNECT D Assy	AWZ6681		29	J205 Flexible Flat Cable	ADD1202
NSP	5	ADR RESONANCE Assy	AWZ6682		30	J206 Flexible Flat Cable	ADD1200
NSP	6	BRIDGE A Assy	AWZ6674		31	J207 Flexible Flat Cable	ADD1208
NSP	7	BRIDGE B Assy	AWZ6675		32	J208 Flexible Flat Cable	ADD1205
NSP	8	BRIDGE C Assy	AWZ6676		33	Power Sheet (43)	AMR3284
NSP	9	BRIDGE D Assy	AWZ6677		34	Rivet	BEC1066
	10	SUB ADDRESS A Assy	AWZ6692		35	J110 3P Housing Wire	ADX2741
	11	SUB ADDRESS B Assy	AWZ6693		36	J108 8P Housing Wire	ADX2740
NSP	12	SCAN (A) Assy	AWZ6666		37	J102 Wire PE	ADX2738
NSP	13	SCAN (B) Assy	AWZ6667		38	J103 13P Housing Wire	ADX2779
	14	Y DRIVE Assy	AWZ6683		39	J116 4P Housing Wire	ADX2783
	15	DIGITAL VIDEO Assy	AWV1941		40	J118 Wire L	ADX2763
	16	THERMAL SENSOR Assy	AWZ6639		41	J119 13P Housing Wire	ADX2768
NSP	17	X CONNECTOR (A) Assy	AWZ6672		42	J109 Wire X	ADX2787
NSP	18	X CONNECTOR (B) Assy	AWZ6673		43	Binder	AEC-093
	19	X DRIVE Assy	AWV1930		44	J204 Flexible Flat Cable	ADD1207
	20	MX AUDIO Assy	AWZ6644		45	J104 Wire W	ADX2786
	21	J209 Flexible Flat Cable	ADD1206		46	J117 4P Housing Wire	ADX2783
	22	J210 Flexible Flat Cable	ADD1204				
	23	J211 Flexible Flat Cable	ADD1199				
	24	J212 Flexible Flat Cable	ADD1201				
	25	J201 Flexible Flat Cable	ADD1183				

2.8 MIDDLE LAYER SECTION (1)

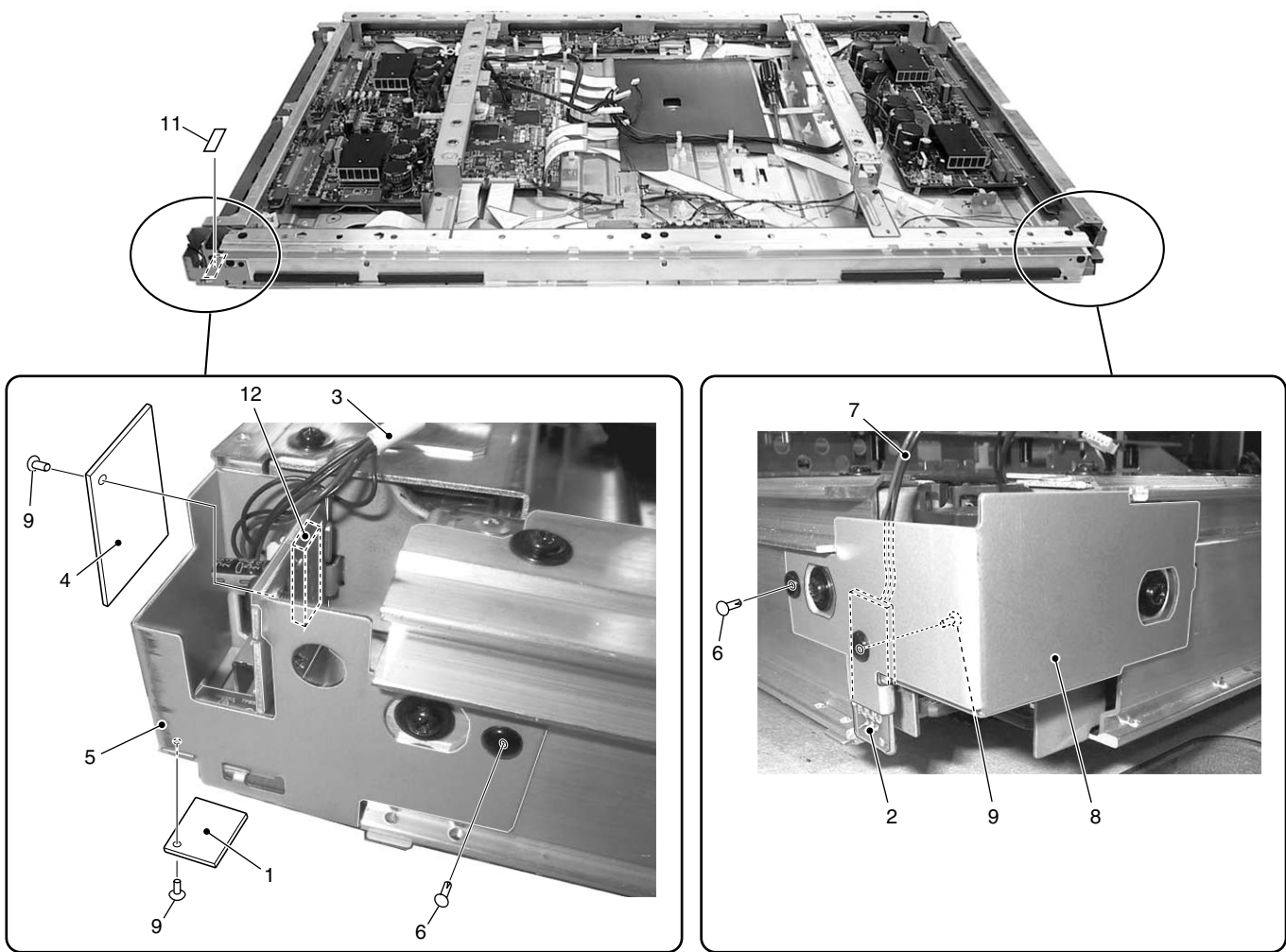


● MIDDLE LAYER SECTION (1) PARTS LIST

Mark	No.	Description	Part No.
NSP	1	Front Chassis HU (43)	ANA1670
NSP	2	Card Spacer	AEC1902
	3	Niplocker	AEC1803
	4	Card Corner Holder	BEC1144
NSP	5	Sub Frame L	ANG2517
NSP	6	Sub Frame R	ANG2518
NSP	7	Front Chassis HL (43CMX)	ANA1692

Mark	No.	Description	Part No.
NSP	8	Front Chassis V (43)	ANA1672
	9	FPC Cushion (43)	AEB1371
	10	Screw	ABA1283
	11	Screw	ABA1294
	12	Screw	BMZ30P060FMC
	13	VR Cushion	AEB1374
	14	V Cushion	AED1205
	15	Gascket R	ANK1695

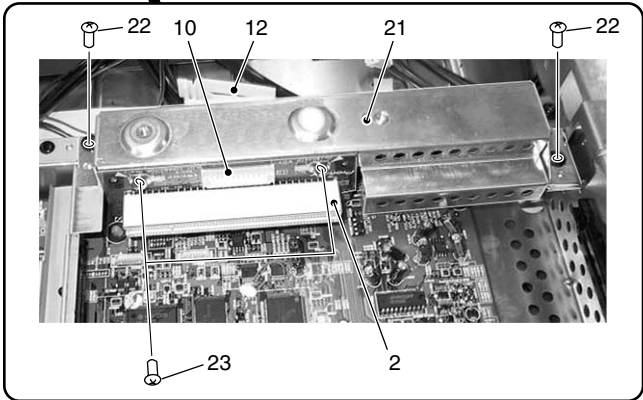
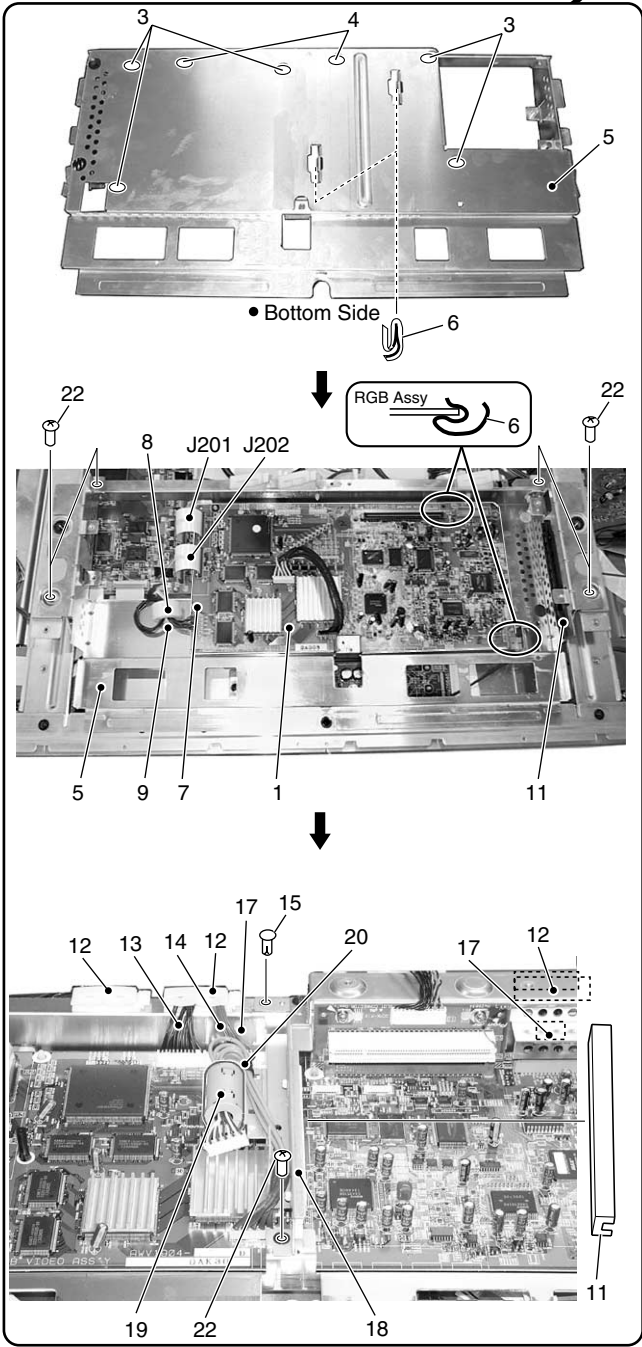
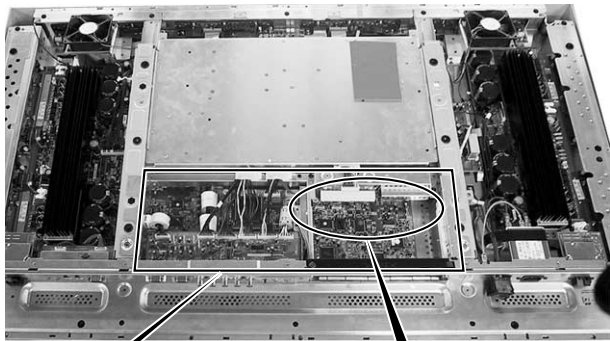
2.9 MIDDLE LAYER SECTION (2)



● MIDDLE LAYER SECTION (2) PARTS LIST

Mark	No.	Description	Part No.
NSP	1	IR Assy	AWZ6643
	2	MX LED Assy	AWZ6642
	3	J113 Wire O	ADX2778
	4	KEY CONNECTOR Assy	AWZ6695
	5	IR Holder	ANG2494
NSP	6	Nyron Rivet	AEC1671
	7	J111 Wire Y	ADX2788
	8	Switch Holder	ANG2493
	9	Screw	BMZ30P040FMC
	10	.....	
	11	V Cushion	AED1205
	12	Gascket R	ANK1695

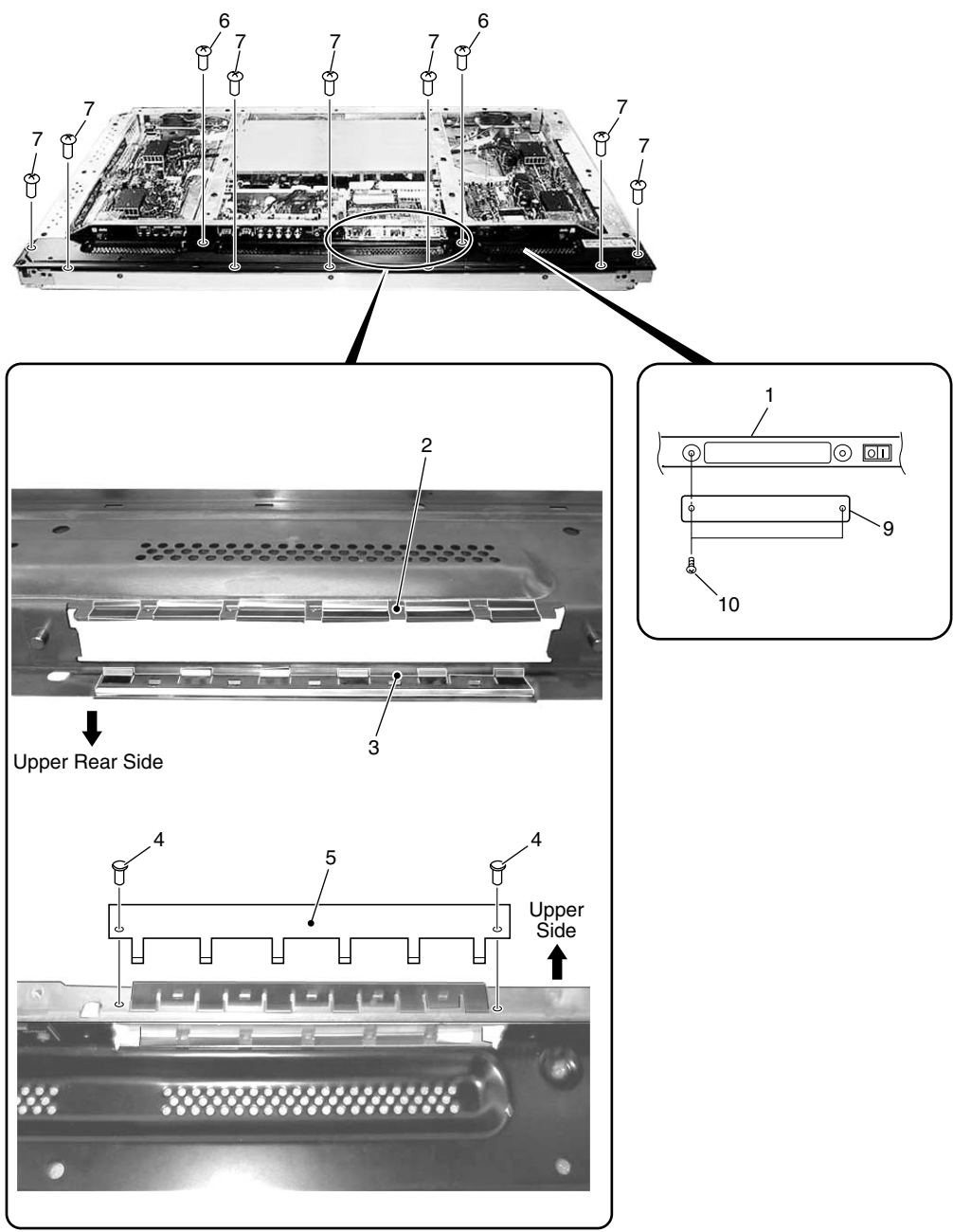
2.10 MIDDLE LAYER SECTION (3)



● MIDDLE LAYER SECTION (3) PARTS LIST

Mark	No.	Description	Part No.
NSP	1	RGB Assy	AWZ6697
	2	SLOT CONNECTOR Assy	AWZ6634
	3	Spacer	AEC1065
	4	Card Spacer	AEC1882
	5	RGB Base	ANA1662
NSP	6	Ground Finger	ANG2468
	7	Card Spacer	AEC1899
	8	Ferrite Core (L3)	ATX1037
	9	Ferrite Core Holder	AEC1818
	10	J112 13P Housing Wire	ADX2784
	11	Guide Rail EX	AEC1900
	12	Clamp	AEC1884
	13	J107 12P Housing Wire	ADX2702
	14	J109 Wire X	ADX2787
	15	Nyron Rivet	AEC1671
NSP	16	•••••	
	17	Wire Saddle	AEC1745
	18	Video Stay	AND1171
	19	Ferrite Core (L2)	ATX1039
	20	Binder	AEC-093
NSP	21	PCB Stay	AND1170
	22	Screw	AMZ30P060FZK
	23	Screw	VBB30P100FNI

2.11 MIDDLE LAYER SECTION (4)



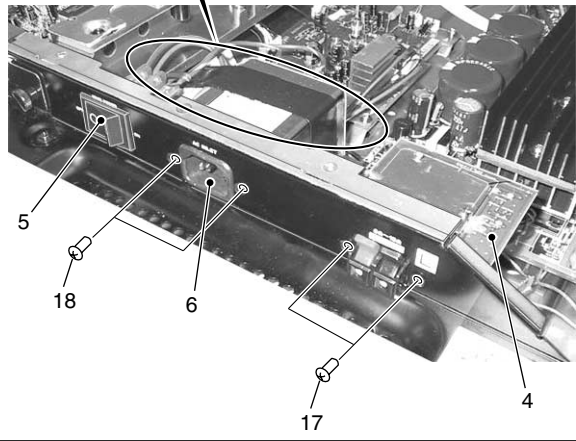
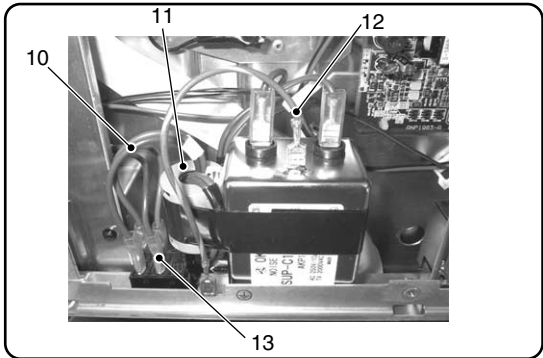
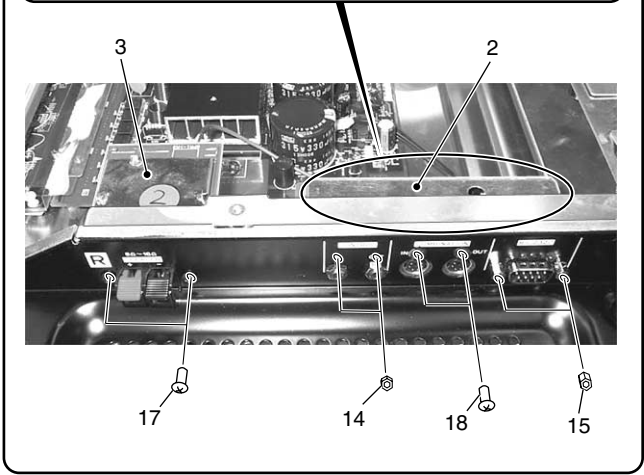
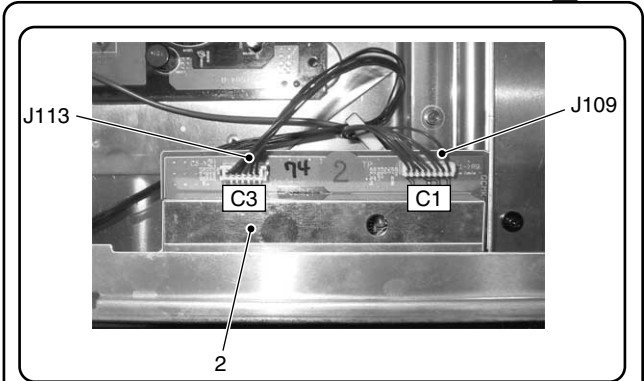
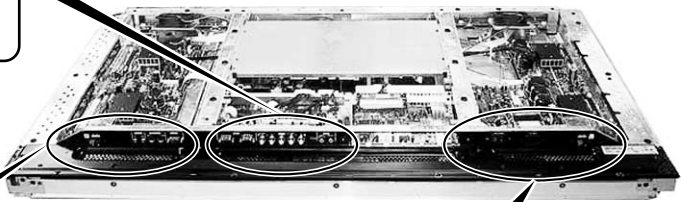
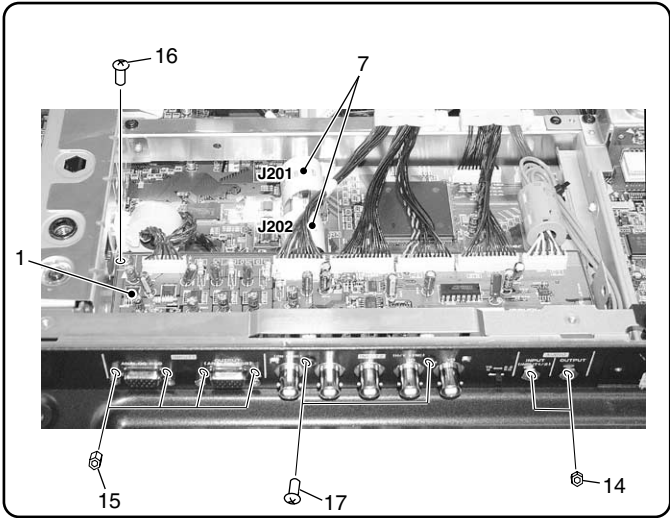
● MIDDLE LAYER SECTION (4) PARTS LIST

Mark	No.	Description	Part No.
	1	Terminal Panel CMX	ANG2486
	2	Slot Spring (Under)	ABK1028
	3	Slot Spring (Upper)	ABK1024
	4	Card Spacer	AEC1898
	5	Enclosure Sheet	AMR3281

Mark	No.	Description	Part No.
	6	Screw	AMZ30P060FZK
	7	Screw	TBZ40P080FZK
	8	.....	
	9	Expansion Slot Cover	ANG2463
	10	Screw	BMZ30P060FZK



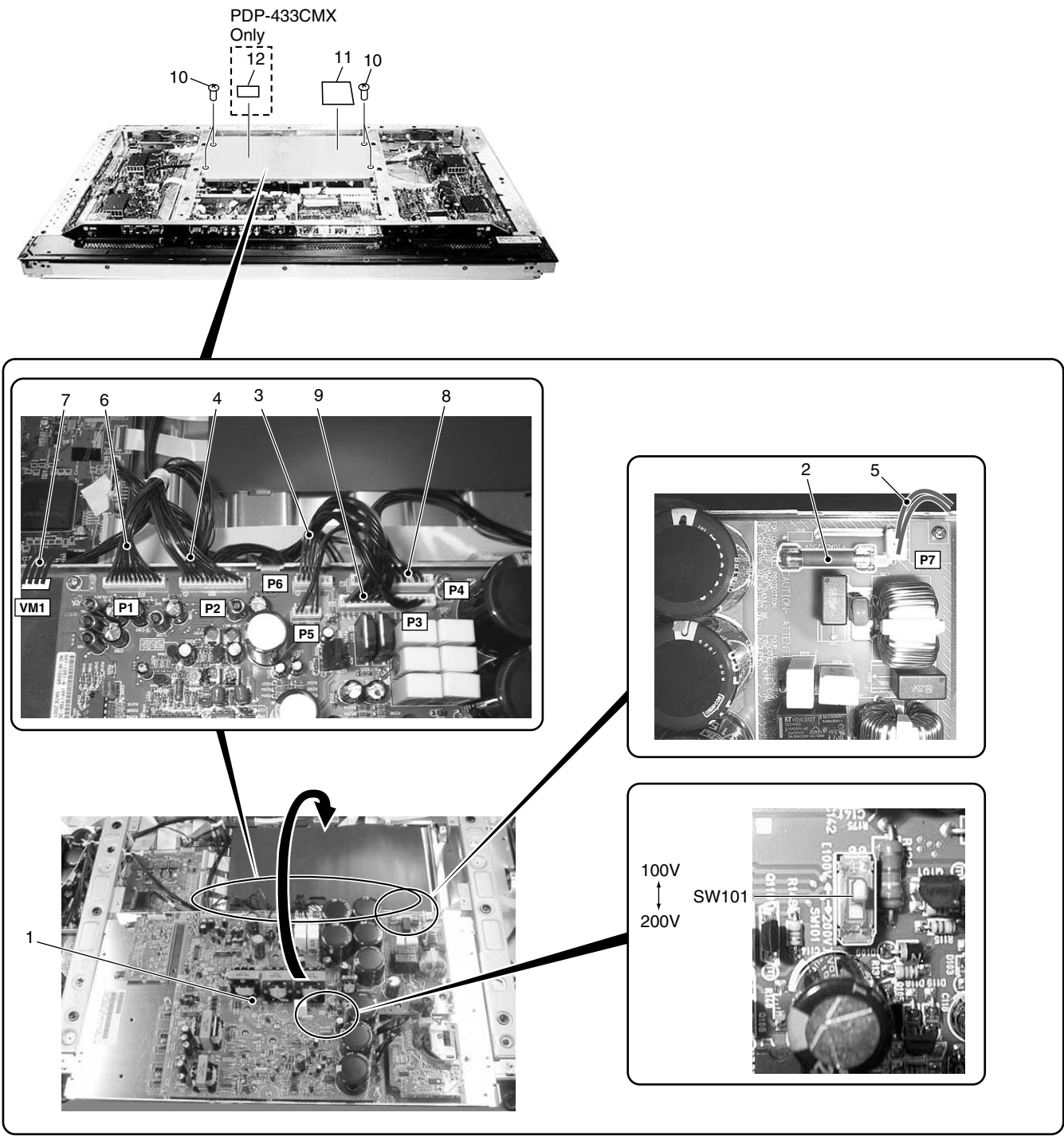
2.12 UPPER LAYER SECTION (1)



# ● UPPER LAYER SECTION (1) PARTS LIST

Mark	No.	Description	Part No.
	1	I/O Assy	AWZ6631
	2	CONTROL Assy	AWZ6633
	3	SP OUT R Assy	AWZ6636
	4	SP OUT L Assy	AWZ6635
△	5	Power Switch (S1)	BSM1006
△	6	AC Inlet with Filter (CN1)	AKP1223
	7	J201, J202 Flexible Cable	ADD1183
	8	.....	
	9	.....	
	10	J106 Wire C	ADX2693
	11	Ferrite Core (L1)	ATX1032
	12	J114 Earth Wire	ADX2709
	13	J105 Wire B	ADX2692
	14	Hexagonal Nut	ABN1035
	15	Hexagonal Head Screw	BBA1051
	16	Screw	PMB30P060FNI
	17	Screw	BPZ30P080FZK
	18	Screw	BMZ30P060FZK

2.13 UPPER LAYER SECTION (2)



**(1) UPPER LAYER SECTION (2) PARTS LIST**

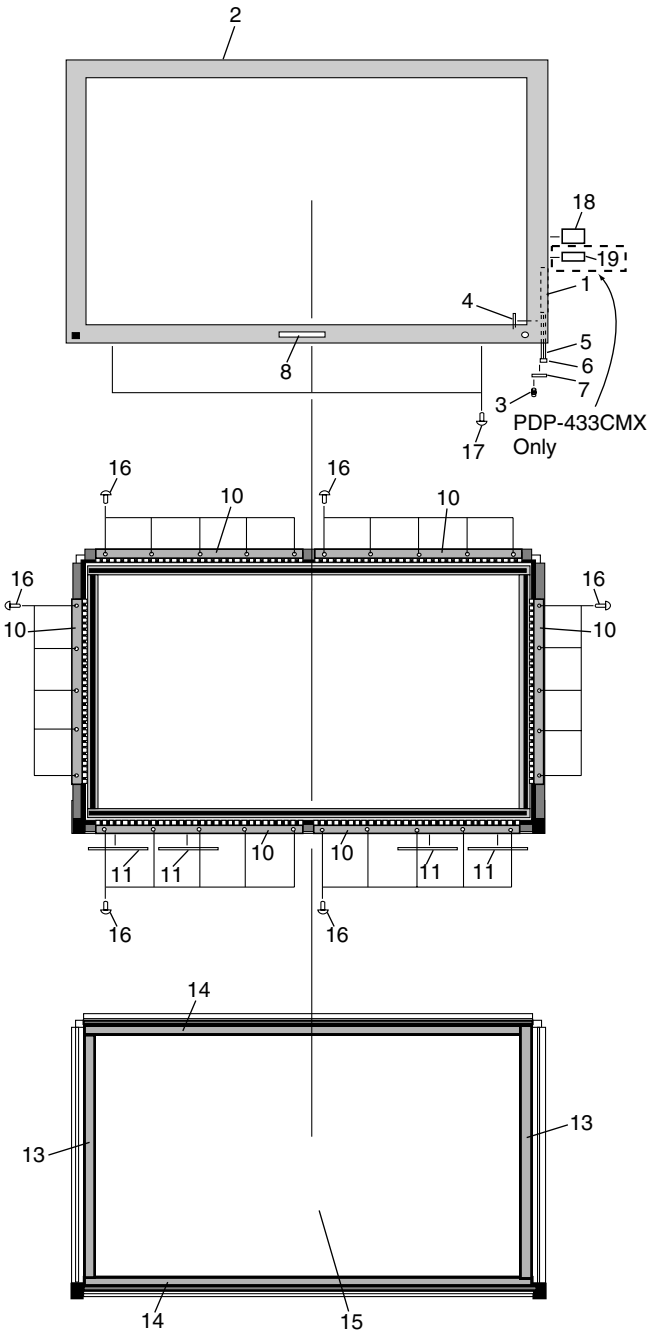
Mark	No.	Description	Part No.
△	1	SW Power Supply Module	AXY1056
△	2	FU1 Fuse (10A)	See Contrast table (2)
	3	J104 Wire W	ADX2786
	4	J119 13P Housing Wire	ADX2768
	5	J105 Wire B	ADX2692
	6	J101 12P Housing Wire	ADX2771
	7	J118 Wire L	ADX2763
	8	J103 13P Housing Wire	ADX2779
	9	J102 Wire PE	ADX2738
	10	Screw	AMZ30P060FZK
	11	Silicone Sheet P	AEH1035
	12	Solder Warning Label	See Contrast table (2)

**(2) CONTRAST TABLE**

PDP-433CMX/LUCB and PDP-433MXE/YVLDK are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			PDP-433CMX	PDP-433MXE	
			LUCB	YVLDK	
△	2	FU1 Fuse (10A/125V)	AEK1069	Not used	
△	2	FU1 Fuse (10A/400V)	Not used	AEK1071	
	12	Solder Warning Label	AAX2644	Not used	

2.14 FRONT CASE SECTION



(1) FRONT CASE SECTION PARTS LIST

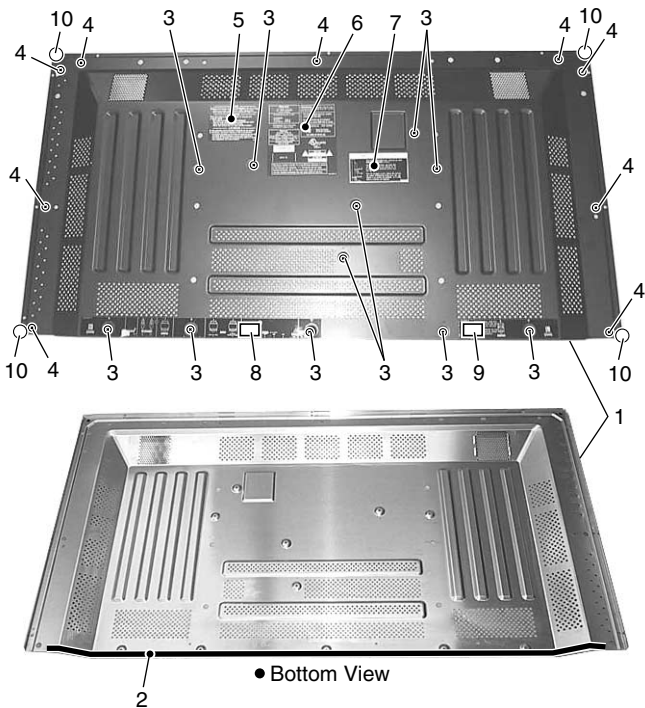
Mark	No.	Description	Part No.
	1	SIDE KEY Assy	AWZ6637
	2	Front Case Assy 43 (M)	AMB2712
	3	Rivet	AEC1877
	4	Flexible Seal	AEH1036
	5	J213 Flexible Cable	ADD1195
	6	Ferrite Core (L4)	ATX1043
	7	Lead Cover (MX)	AMB2703
	8	Pioneer Badge	AAM1091
	9	•••••	
NSP	10	Panel Holder (43)	ANG2487
	11	Spacer	AEC1896
	12	•••••	
	13	Panel Cushion V (43)	AED1201
	14	Panel Cushion H (43)	AED1200
	15	Protect Panel Assy (43)	AMR3303
	16	Screw	ABZ30P050FZK
	17	Screw	VMZ30P060FZK
	18	Energy Star Label	AAX2856
NSP	19	Display Label	See Contrast table (2)

(2) CONTRAST TABLE

PDP-433CMX/LUCB and PDP-433MXE/YVLDK are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			PDP-433CMX	PDP-433MXE	
			LUCB	YVLDK	
NSP	19	Display Label	AAX2836	Not used	

2.15 REAR SECTION



(1) REAR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Rear Case (M)	ANE1601
	2	Gascket A	ANK1694
	3	Screw	AMZ30P060FZK
	4	Screw	TBZ40P080FZK
	5	Cleaning Label	AAX2751
NSP	6	Name Label	See Contrast table (2)
	7	Bolt Caution Label	AAX2852
	8	Terminal Display Label R (43)	AAX2878
	9	Terminal Display Label L (43)	See Contrast table (2)
	10	Rear Corner Label	AAX2862

(2) CONTRAST TABLE

PDP-433CMX/LUCB and PDP-433MXE/YVLDK are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			PDP-433CMX	PDP-433MXE	
			LUCB	YVLDK	
NSP NSP	6	Name Label (43 CMX)	AAL2385	Not used	
	6	Name Label (43 MXE)	Not used	AAL2390	
	9	Terminal Display Label L (43)	AAX2876	Not used	
	9	Terminal Display Label L (43E)	Not used	AAX2877	

## 2.16 PDP SERVICE ASSY 433 (AWU1043)

PDP Service Assy 433 (AWU1043) consists of the following parts.

### ● PARTS LIST

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
		Panel Chassis (43) Assy	AWU1038			Insulation Sheet	AMR3263
NSP		Front Chassis V (43)	ANA1672			Scan Sheet (43)	AMR3287
NSP		Front Chassis HU (43)	ANA1670			Card Corner Holder	BEC1144
NSP		Front Chassis HL	ANA1692			Screw	ABA1283
NSP		Sub Frame L (43)	ANG2517			Screw	ABA1294
NSP		Sub Frame R (43)	ANG2518			Screw	ABZ30P060FMC
		Scan IC Spring (43L)	ABK1029			Screw	BMZ30P060FMC
		Scan IC Spring (43R)	ABK1030			Screw	PMB30P060FNI
NSP		Metal Fitting	ANG2464			Screw	VBB30P100FNI
		FPC Cushion (43)	AEB1371			Bolt	ABA1259
NSP		PCB Spacer	AEC1121			Corner Pad	AHA2293
		Locking Card Spacer	AEC1736			Upper Carton	AHD3139
		Circuit Board Spacer	AEC1872			Under Carton	AHD3140
		Circuit Board Spacer	AEC1873			Packing Sheet	AHG1291
		Spacer	AEC1896			Washer	WB80FZB
NSP		Card Spacer	AEC1902			VR Cushion	AEB1374
		Wire Saddle	AEC1904			Niplocker	AEC1803
		Panel Cushion H (43)	AED1200			Static Plate	AHK1013
		Panel Cushion V (43)	AED1201			Plate	AHK1014
		V Cushion	AED1205			Screw	BYC40P220FMC
						Washer	WC60FZK

## 2.17 PANEL CHASSIS (43) ASSY (AWU1038)

Panel Chassis (43) Assy (AWU1038) consists of the following parts.

### ● PARTS LIST

Mark	No.	Description	Part No.
NSP		SCAN FUKUGO ASSY	AWV1927 *
NSP		ADDRESS FUKUGO ASSY	AWV1928 *
NSP		Address Module (IC1 - IC32)	AXF1113
NSP		FPC (J1,J2)	ADY1079
NSP		FPC (J3,J4)	ADY1080
NSP		Chassis Assy (43)	ANA1693
NSP		— Chassis (43)	ANA1668
NSP		— Base Chassis (43)	ANA1669
NSP		— Scan Heatsink (43)	ANH1601
NSP		— Corner Angle A	ANG2457
NSP		— Corner Angle B	ANG2458
NSP		— Tube Cover	AMR3262
		— Silicone Sheet 43	AEH1043
		— Adhesive Tape 43	AEH1044
		— Adhesive Tape B 43	AEH1054
		— Panel Silicone Sheet	AEH1055
		— Silicone Sheet B 43	AEH1056
		Pin Grommet	AEC1015
		Card Spacer	AEC1889
		Scan Silicone Sheet (43)	AEH1047
NSP		Plasma Panel Assy (43)	AAV1239
		Screw	VBB30P100FNI

### ● LIST OF ASSY

Mark	No.	Description	Part No.
NSP		SCAN FUKUGO ASSY	AWV1927
NSP		— SCAN (A) ASSY	AWZ6666
NSP		— SCAN (B) ASSY	AWZ6667
NSP		— X CONNECTOR (A) ASSY	AWZ6672
NSP		— X CONNECTOR (B) ASSY	AWZ6673
NSP		— BRIDGE A ASSY	AWZ6674
NSP		— BRIDGE B ASSY	AWZ6675
NSP		— BRIDGE C ASSY	AWZ6676
NSP		— BRIDGE D ASSY	AWZ6677
		ADDRESS FUKUGO ASSY	AWV1928
NSP		— ADR CONNECT A ASSY	AWZ6678
NSP		— ADR CONNECT B ASSY	AWZ6679
NSP		— ADR CONNECT C ASSY	AWZ6680
NSP		— ADR CONNECT D ASSY	AWZ6681
		— ADR RESONANCE ASSY	AWZ6682

## ■ Caution in Replacement of Chassis Block

Please order the PDP Service Assy 433 (AWU1043) when replacing the Chassis block.  
PDP Service Assy 433 is all common use parts of for business, public use and module.  
Supply it by the state that installed Circuit Board Spacer (AEC1872) and Wire Saddle (AEC1904) as follows.  
Therefore need to remove it in accordance with model.

Confirm character carved a seal near the parts, and remove it.

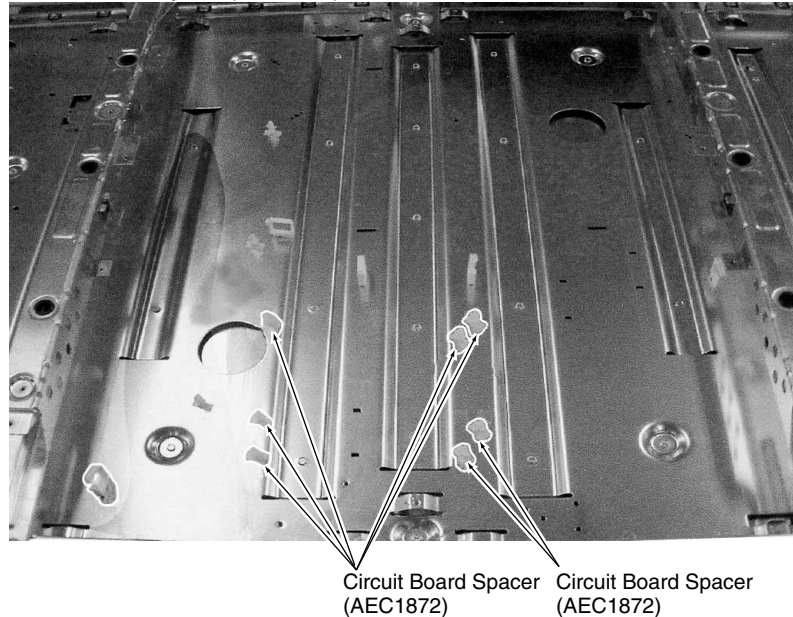
P : Public exclusive use

W : Module exclusive use

PW : Common use of public use and module

\* In case of this unit, the parts that "W" is marked removes.

PDP Service Assy 433 (AWU1043)

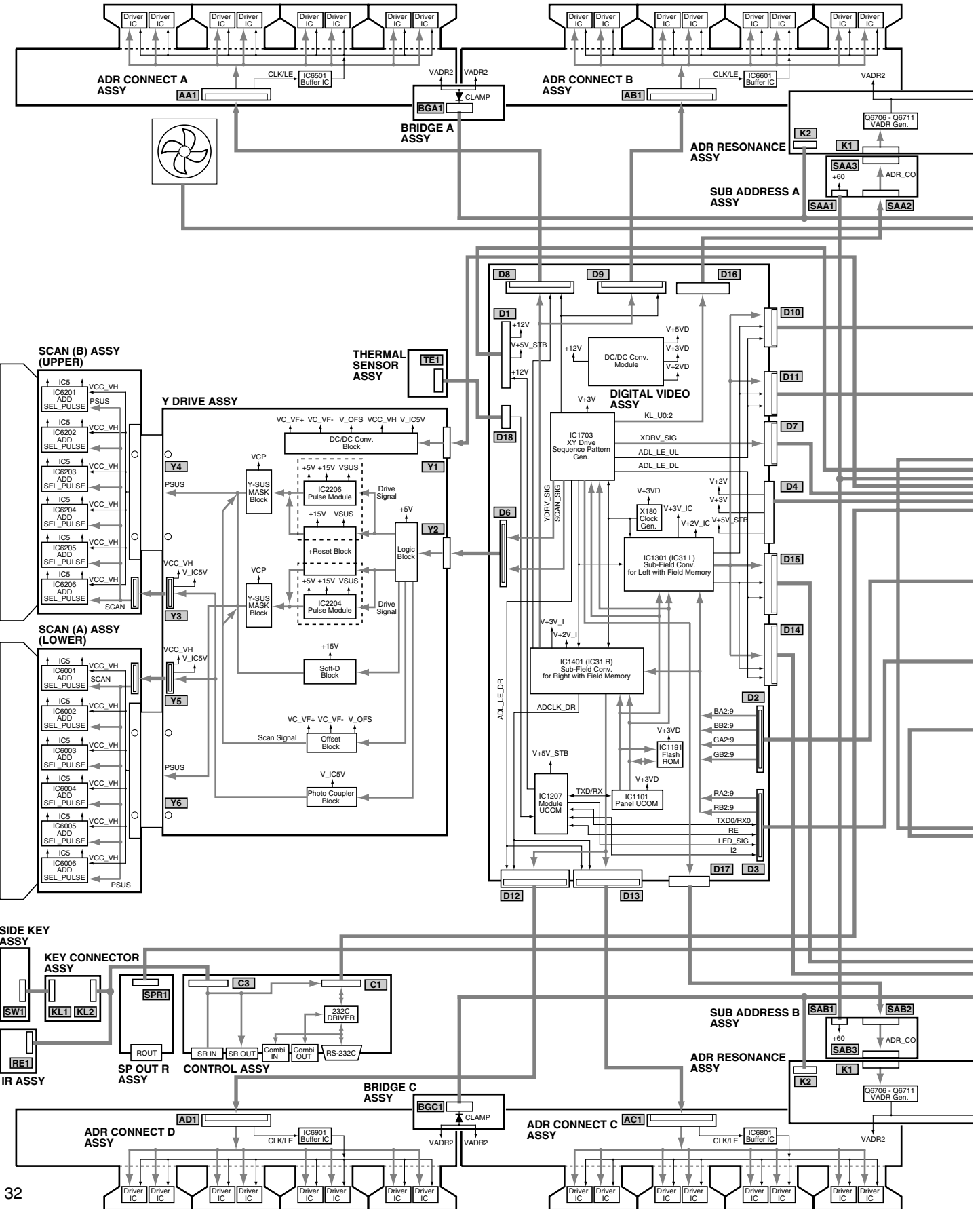




# 3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

## 3.1 BLOCK DIAGRAM

### 3.1.1 OVERALL BLOCK DIAGRAM



B



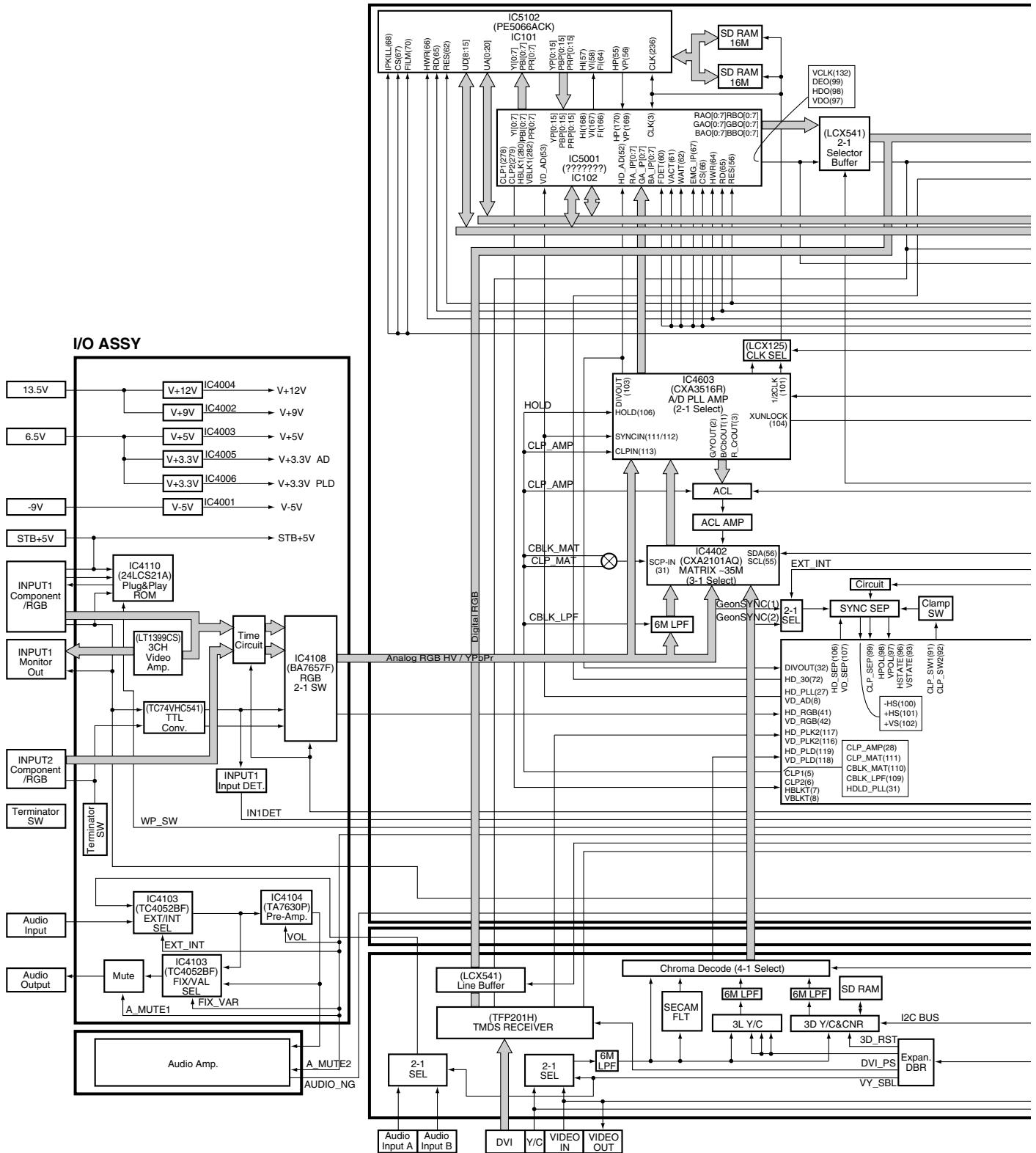
### 3.1.2 RGB ASSY

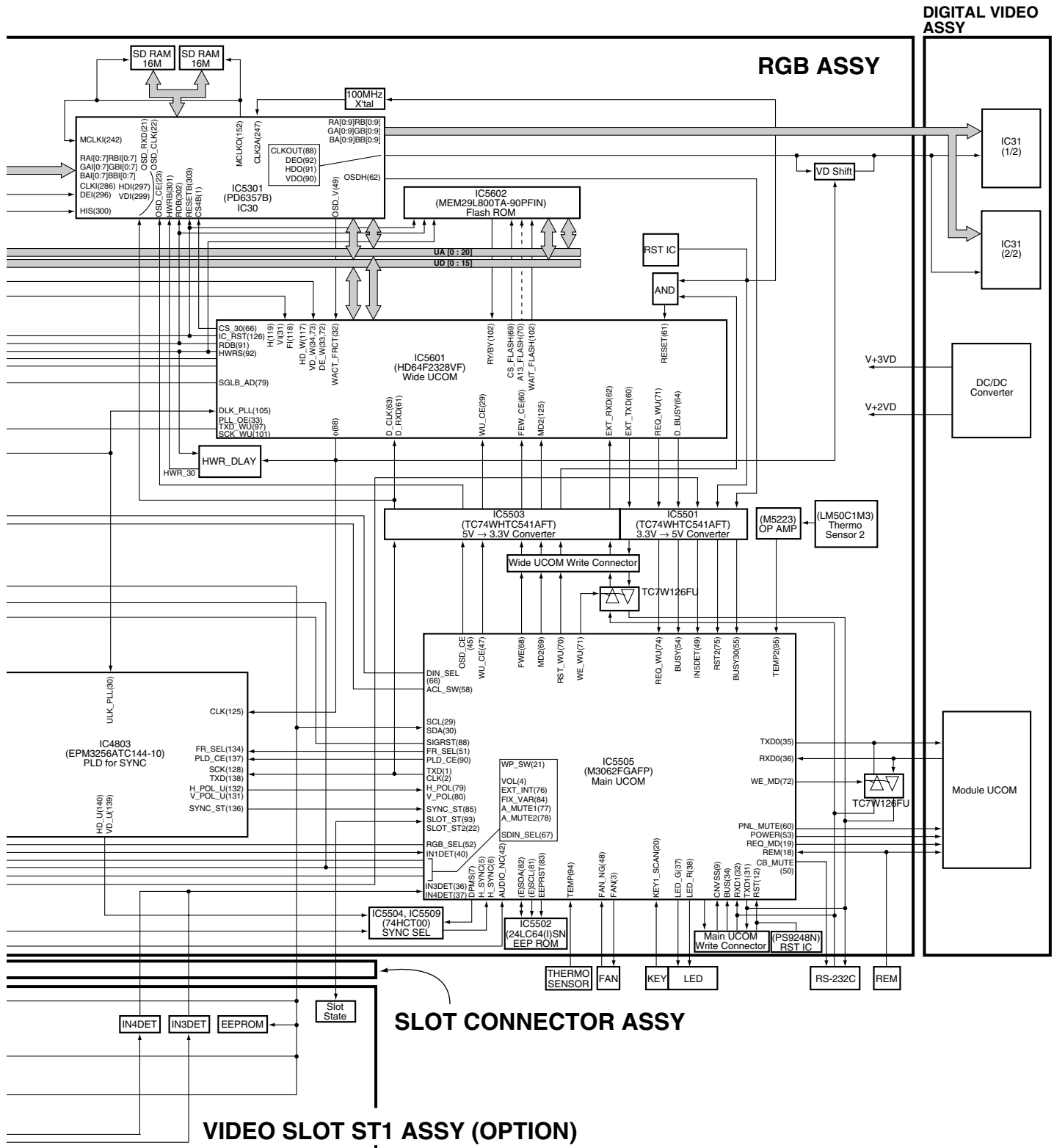
A

B

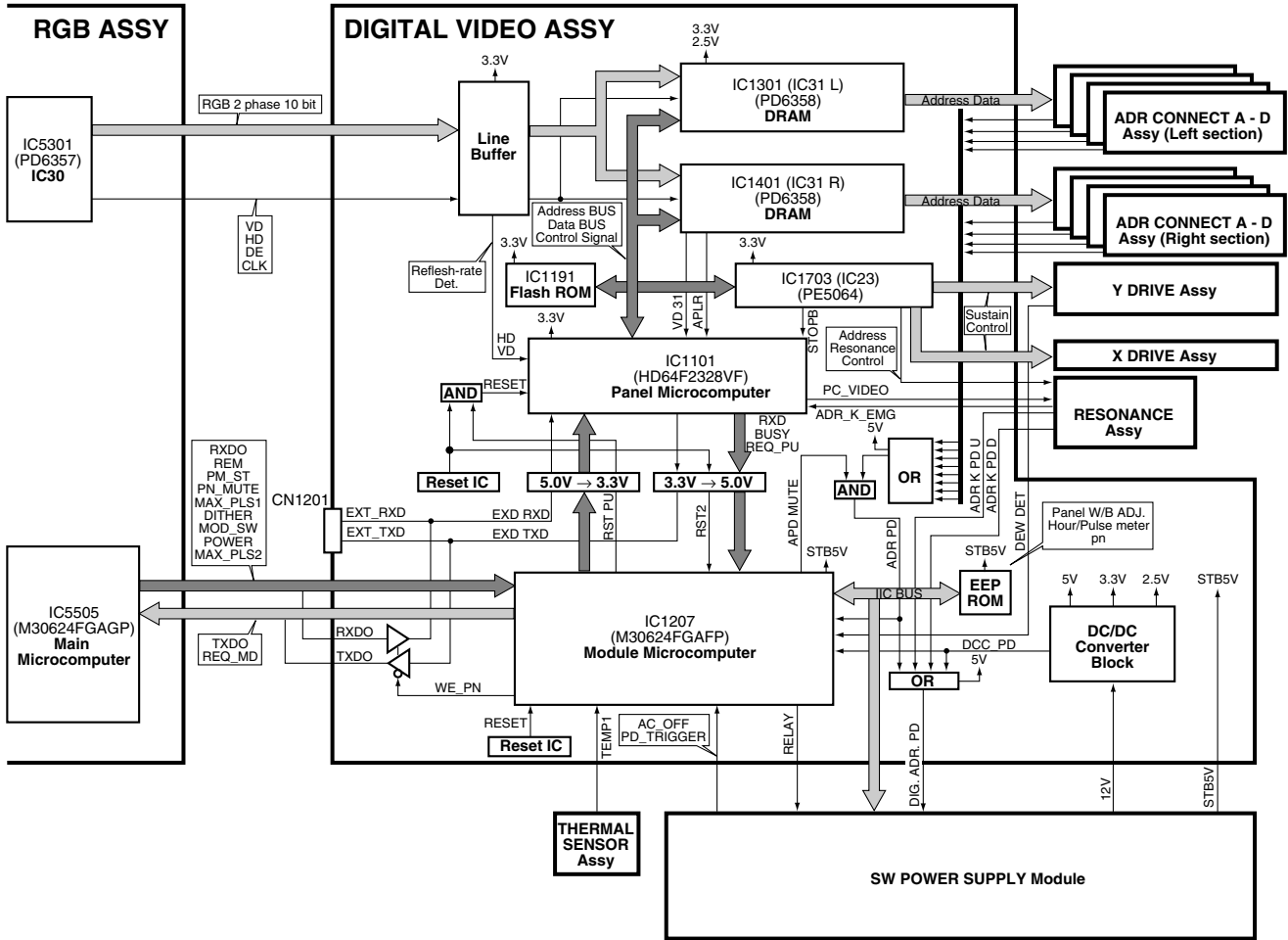
C

D

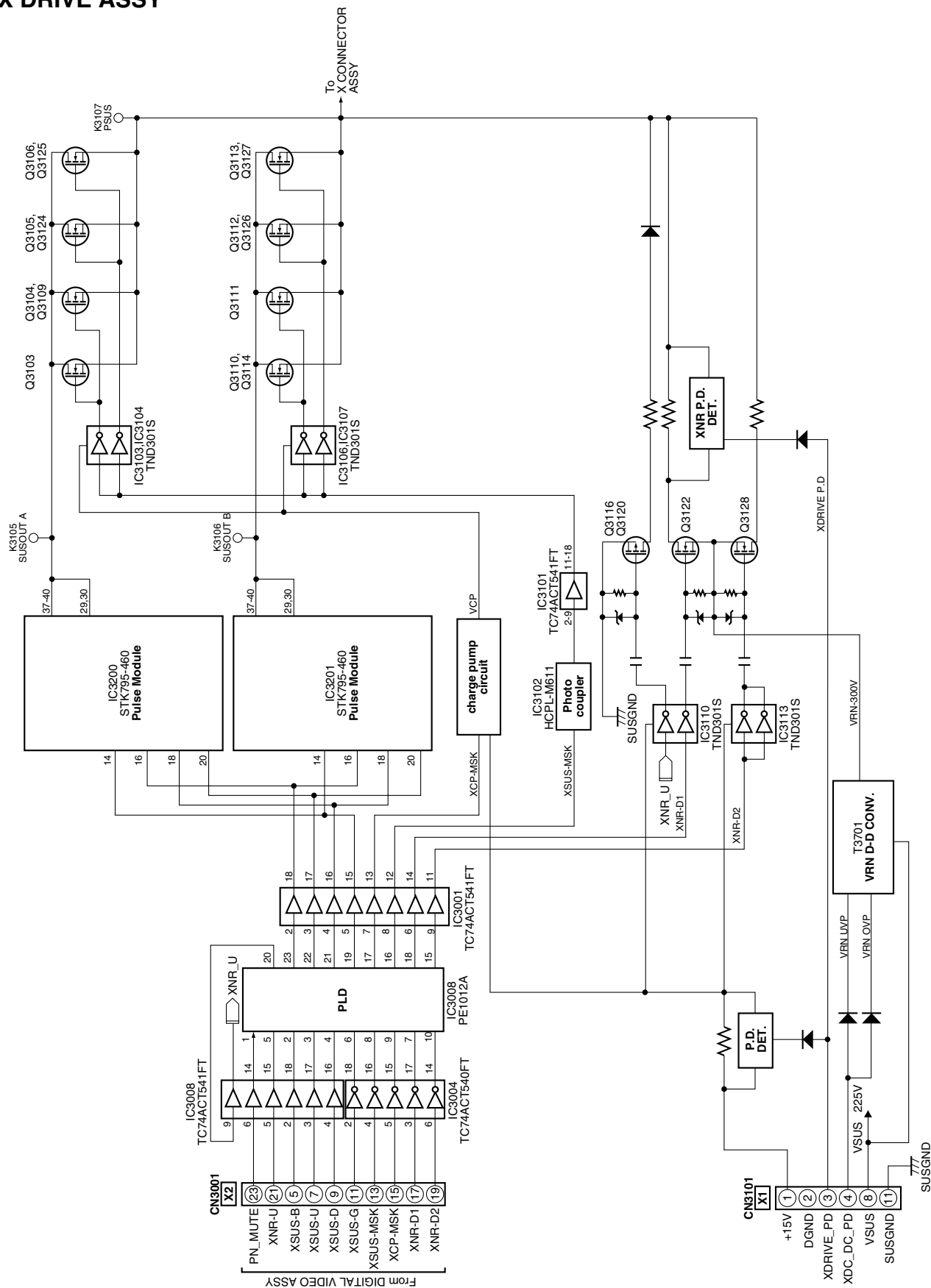




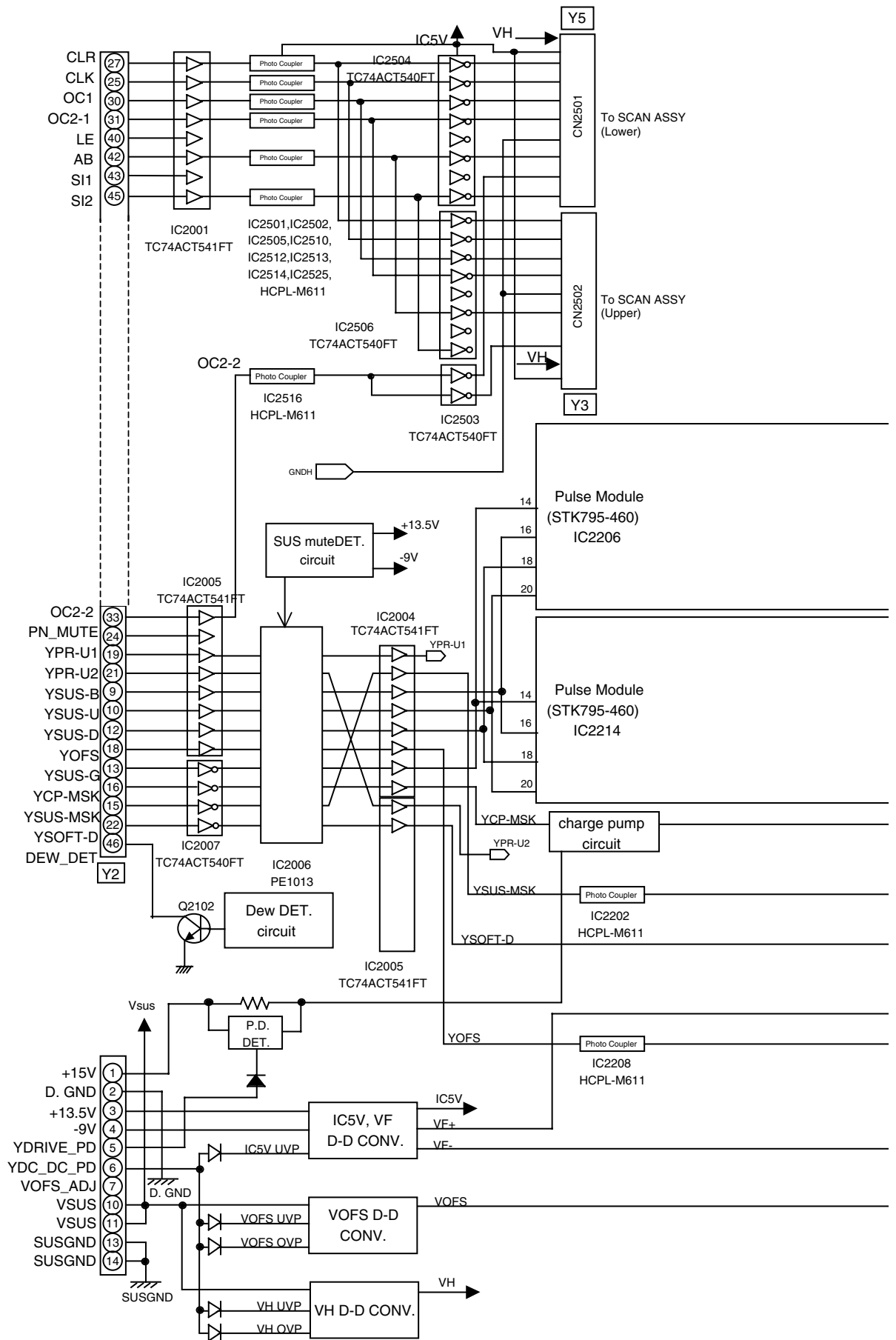
3.1.3 DIGITAL VIDEO ASSY

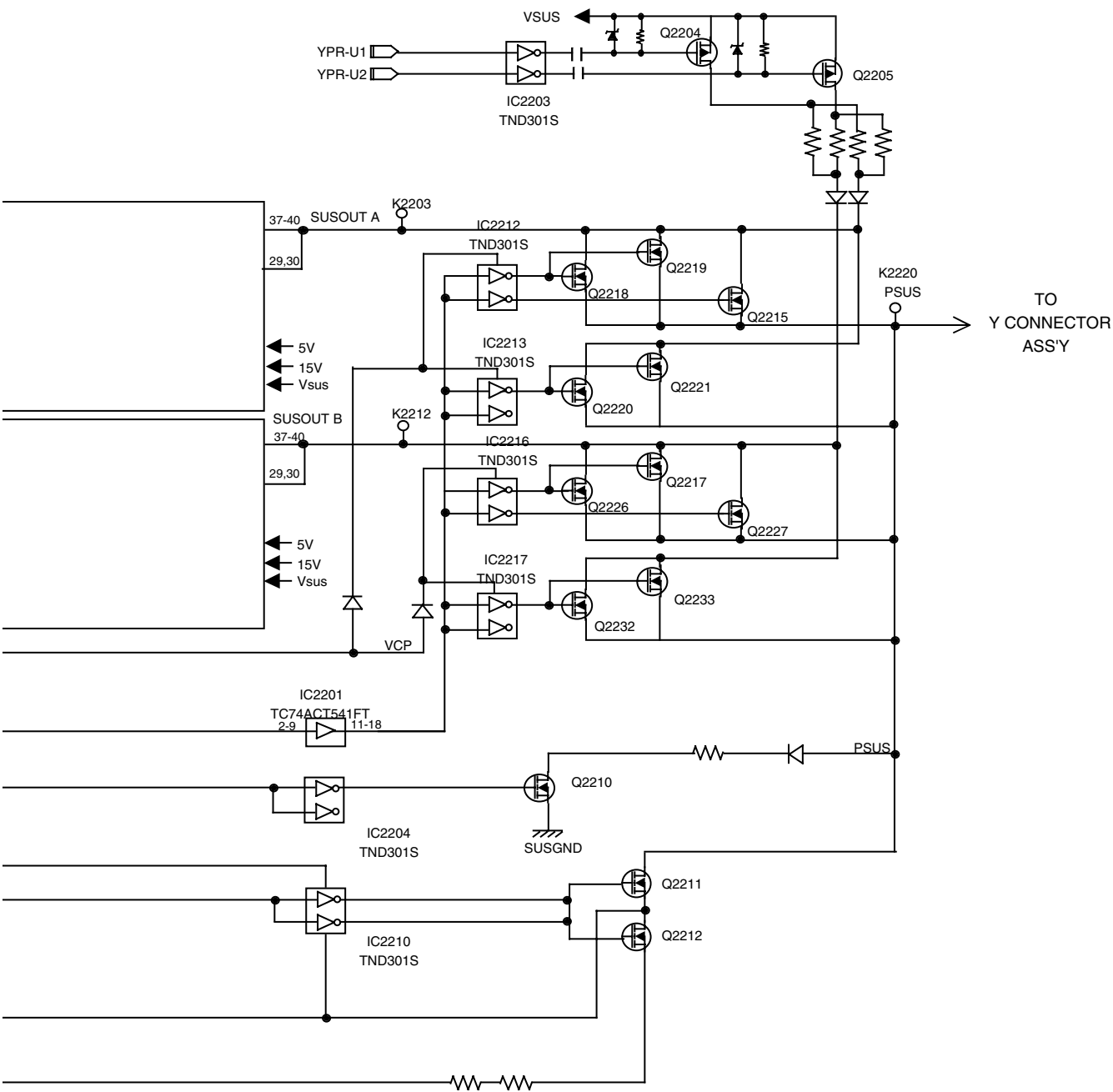


### 3.1.4 X DRIVE ASSY



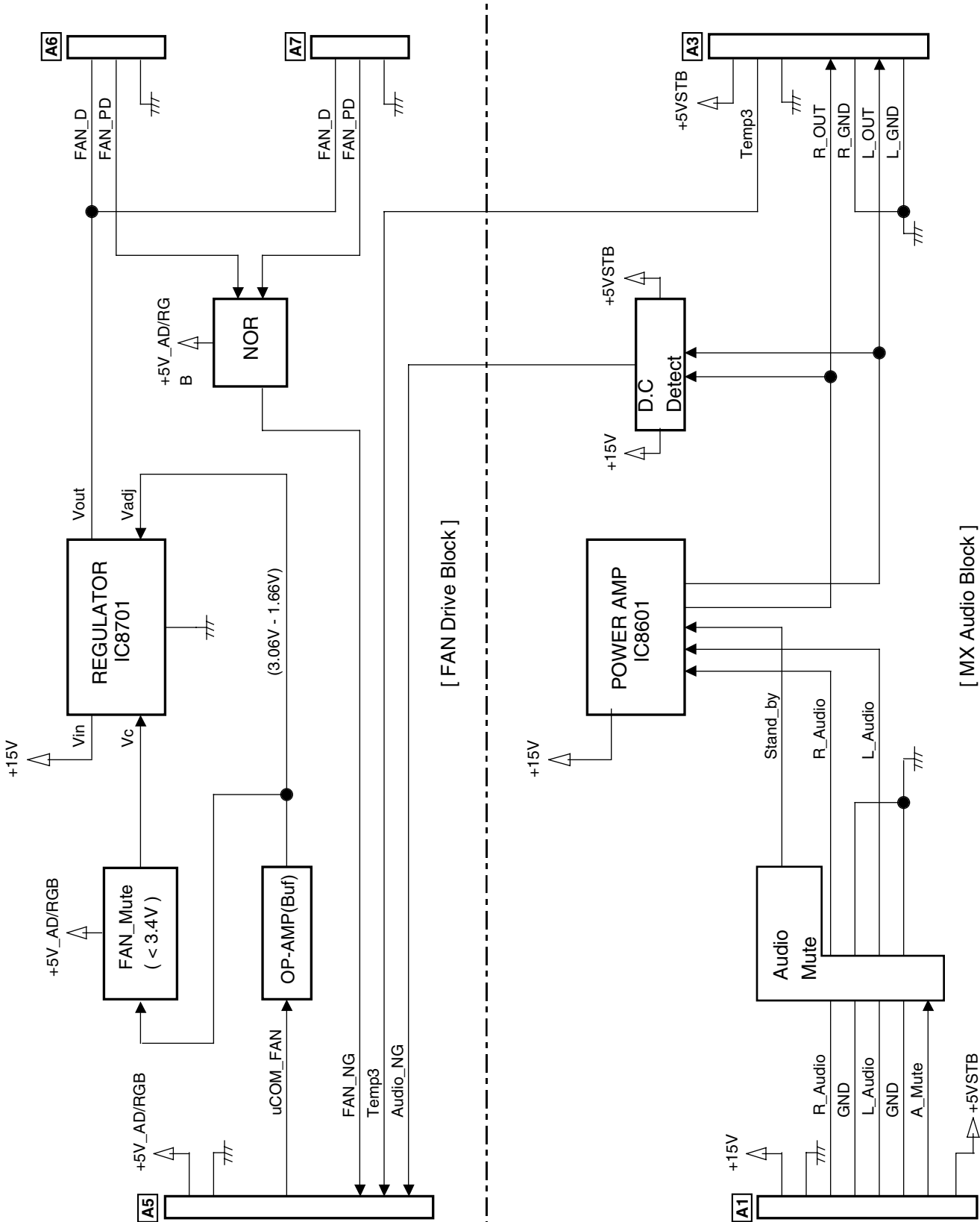
3.1.5 Y DRIVE ASSY



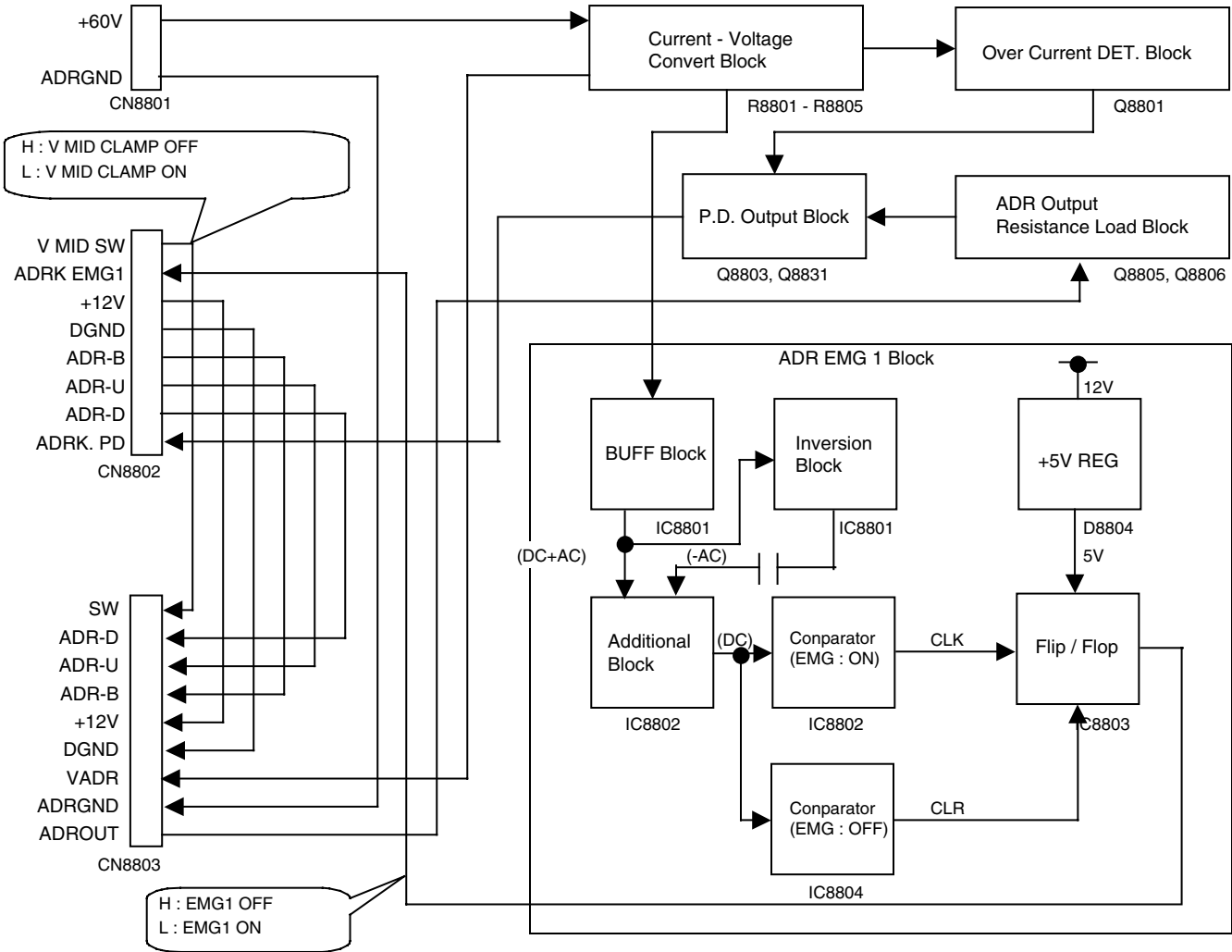




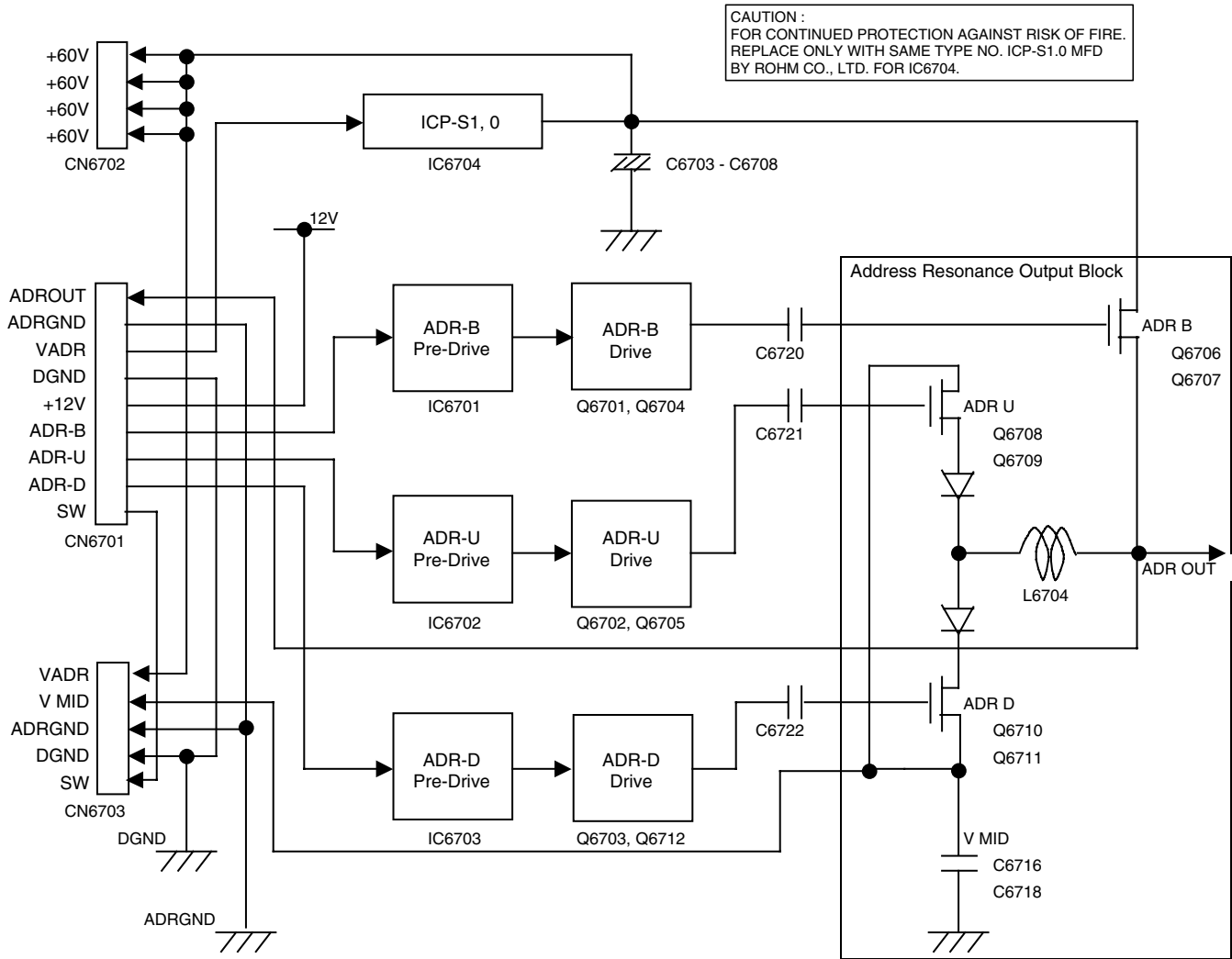
3.1.6 MX AUDIO ASSY



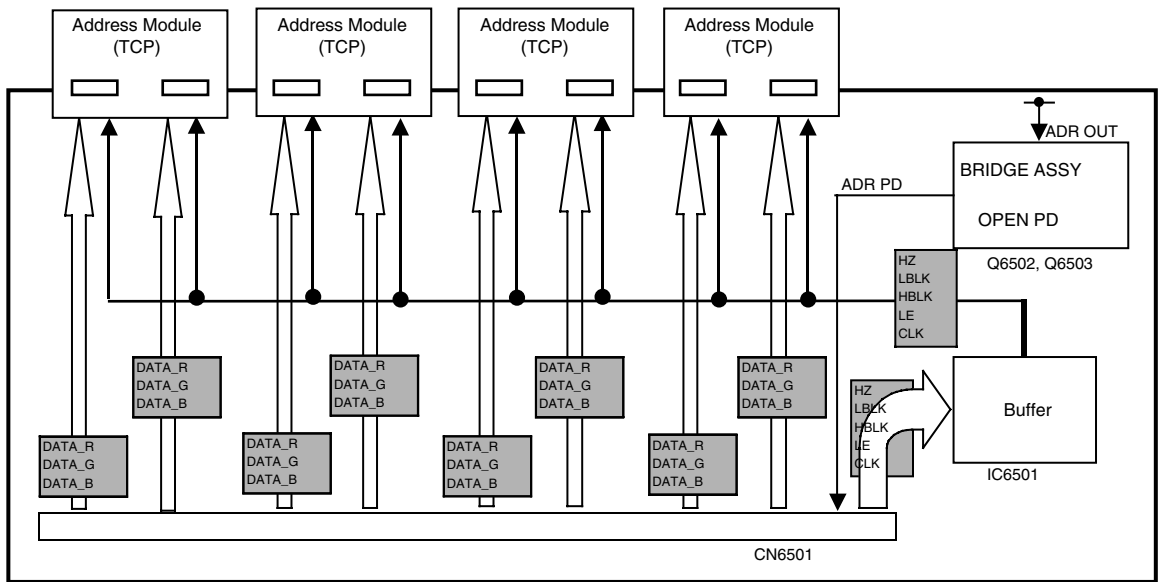
3.1.7 SUB ADDRESS A and B ASSYS



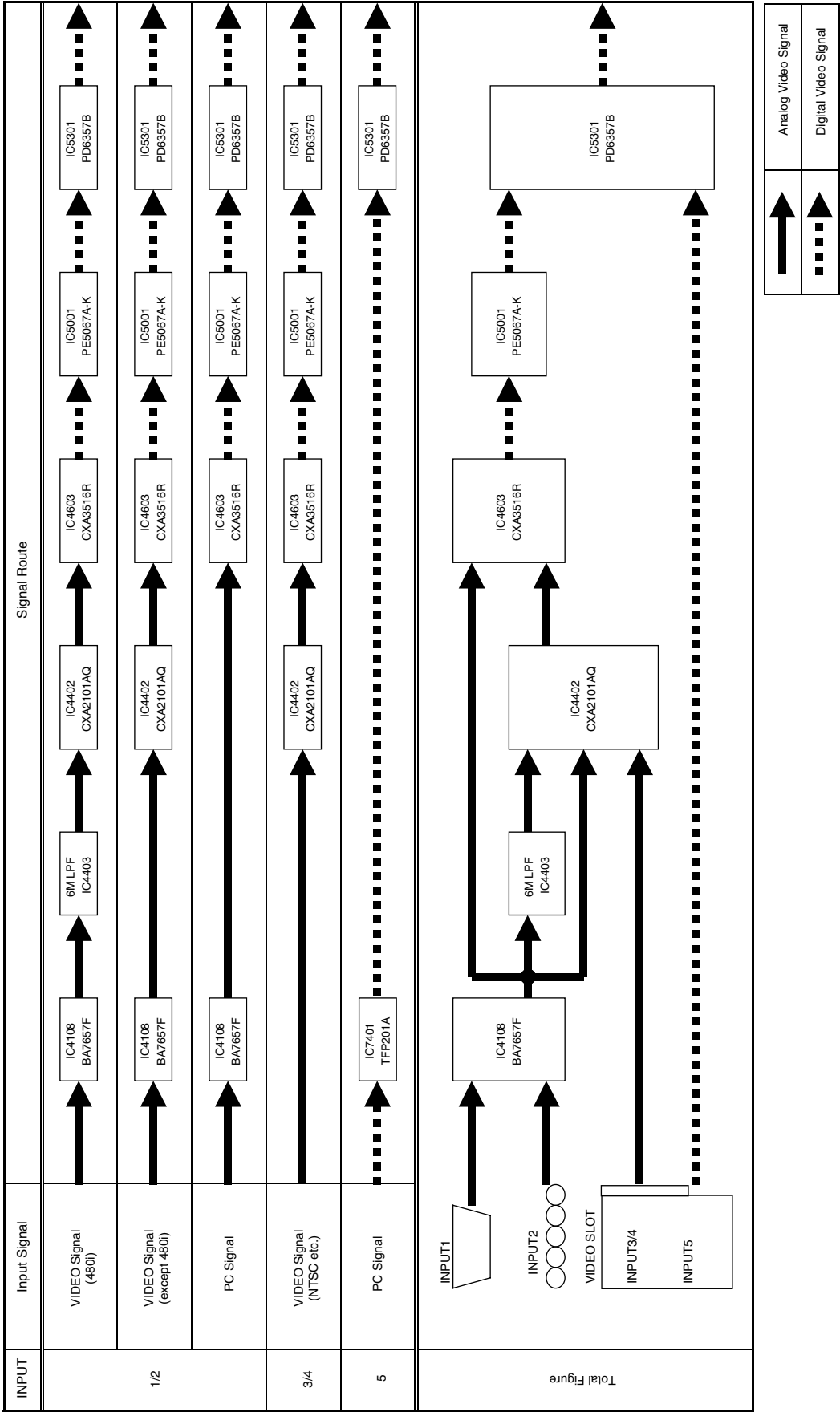
3.1.8 ADR RESONANCE ASSY



3.1.9 ADR CONNECT A, B, C and D ASSYS



3.1.10 VIDEO SIGNAL ROUTE



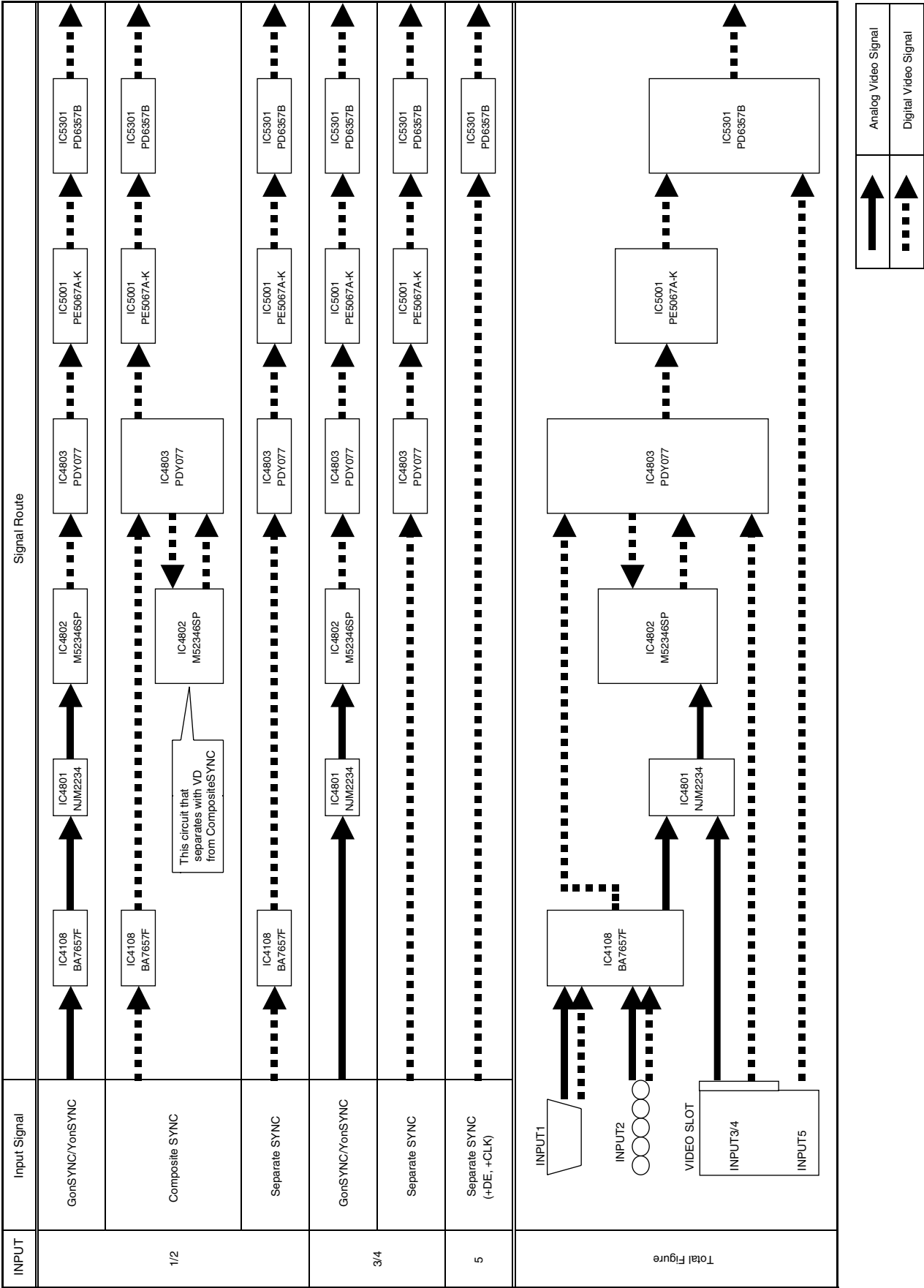
3.1.11 SYNC SIGNAL ROUTE

A

B

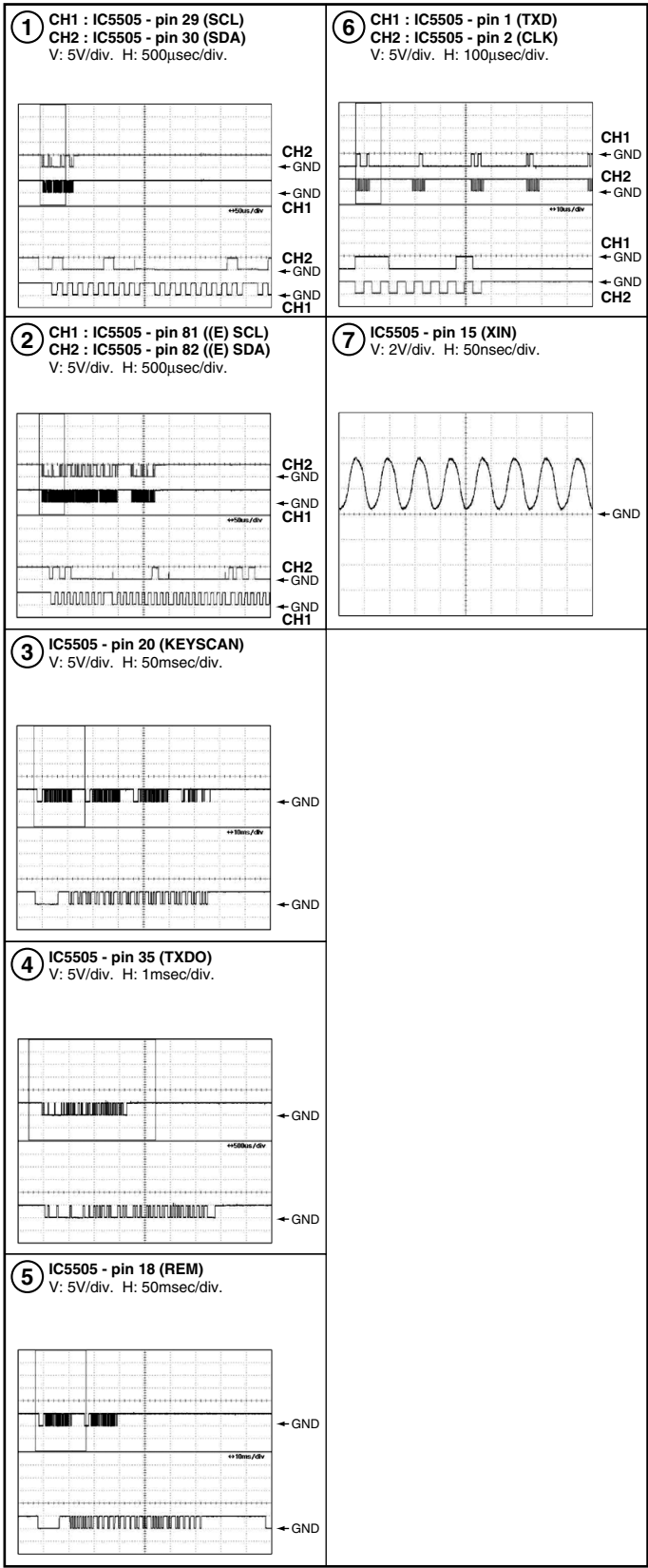
C

D

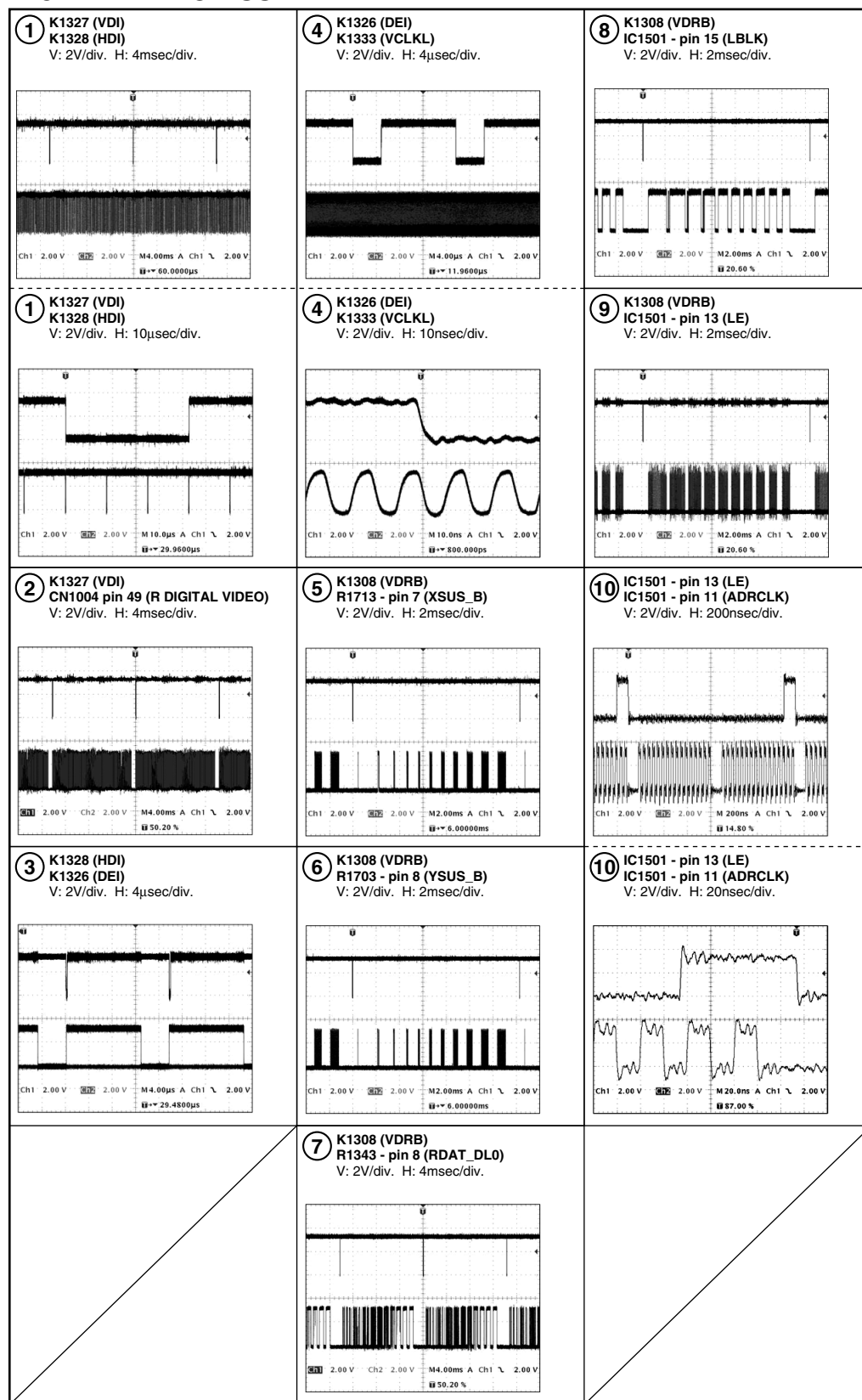


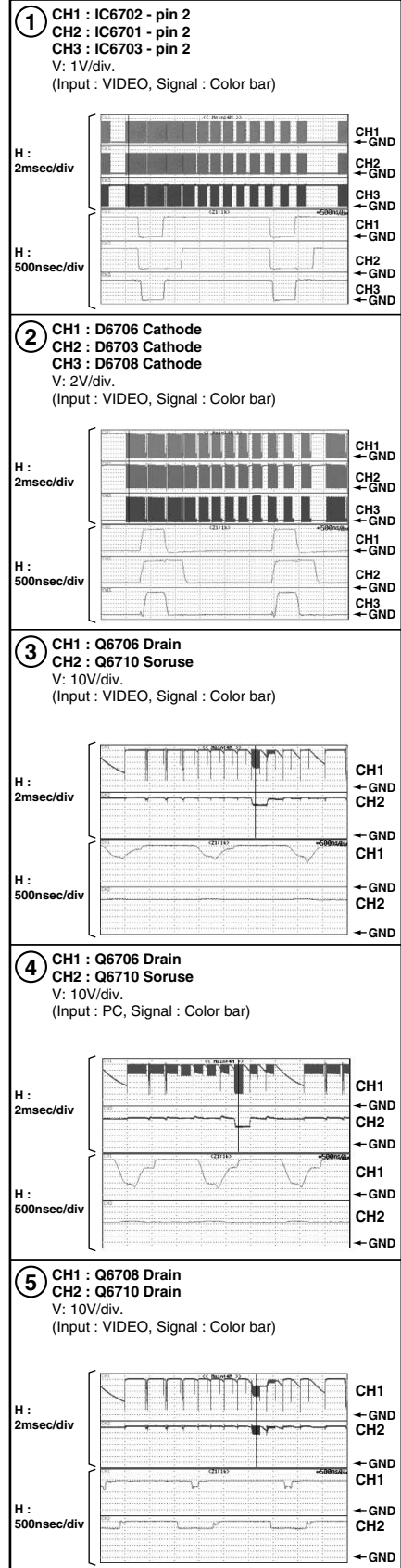
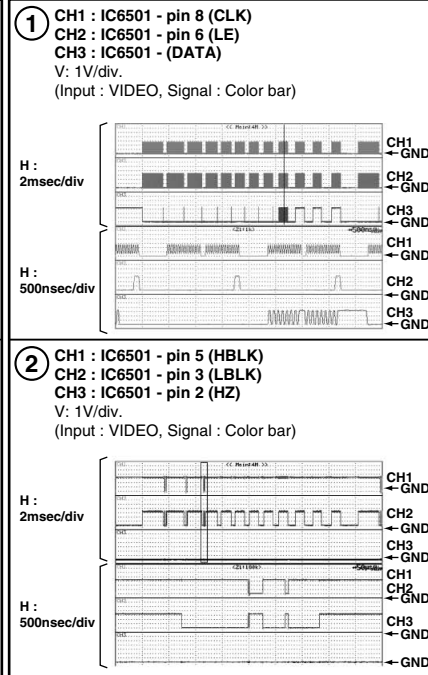
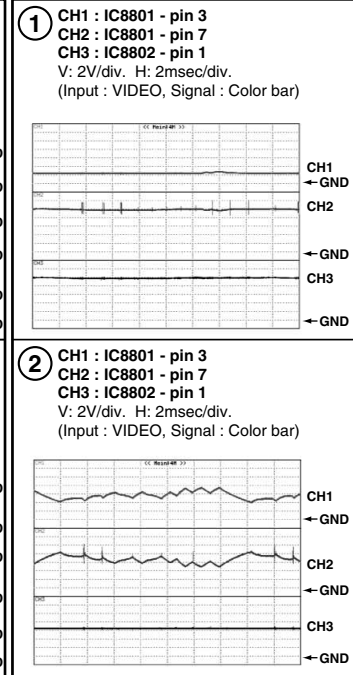
3.2 WAVEFORMS

RGB ASSY



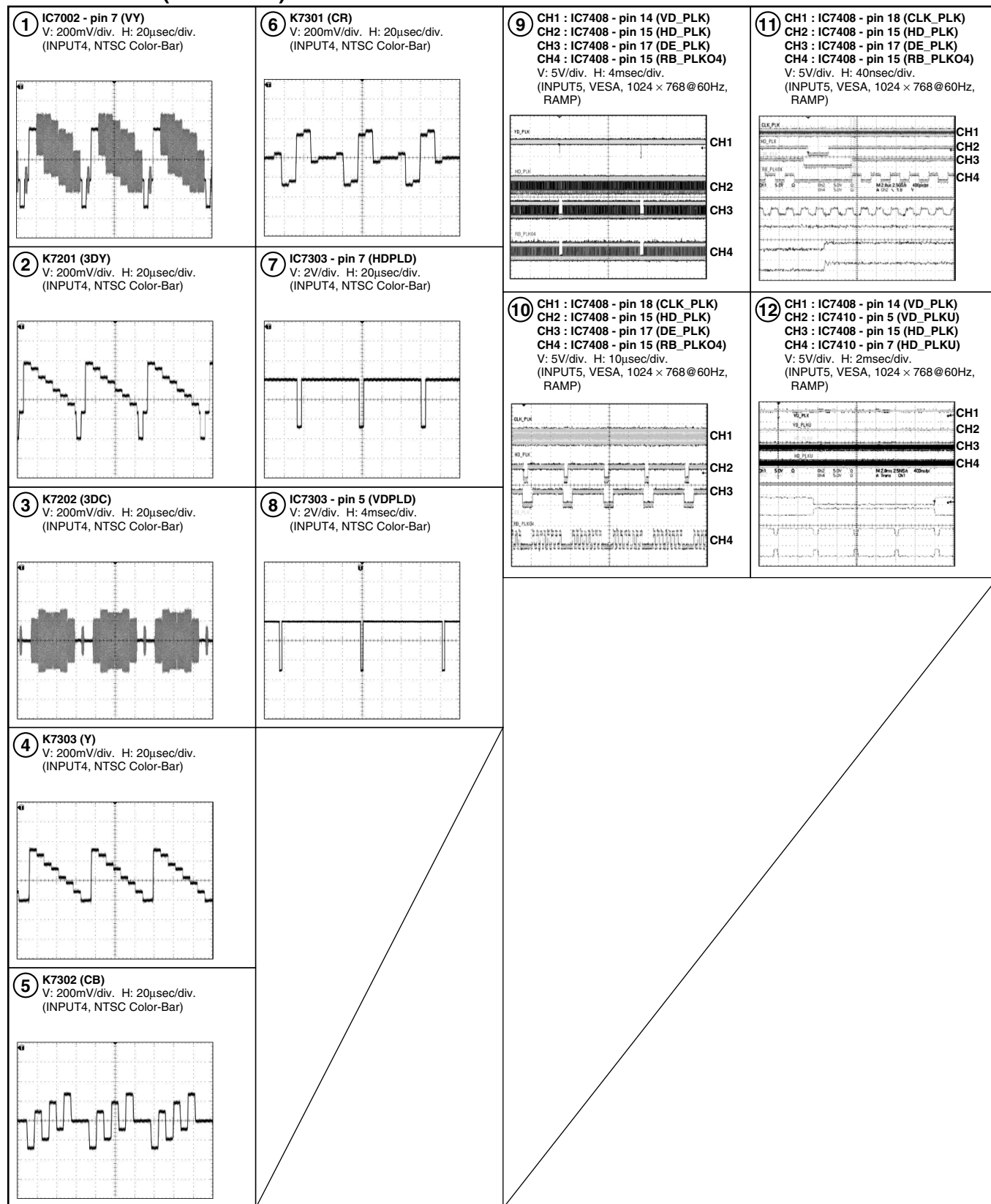
## DIGITAL VIDEO ASSY



**RESONANCE ASSY****ADR CONNECT A - D ASSY****SUB ADDRESS A, B ASSY**

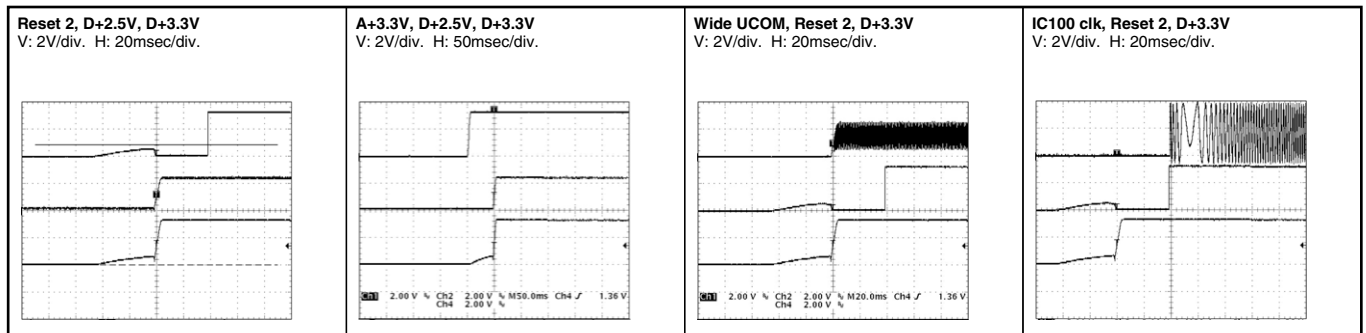


## VIDEO CARD (PDA-5002)

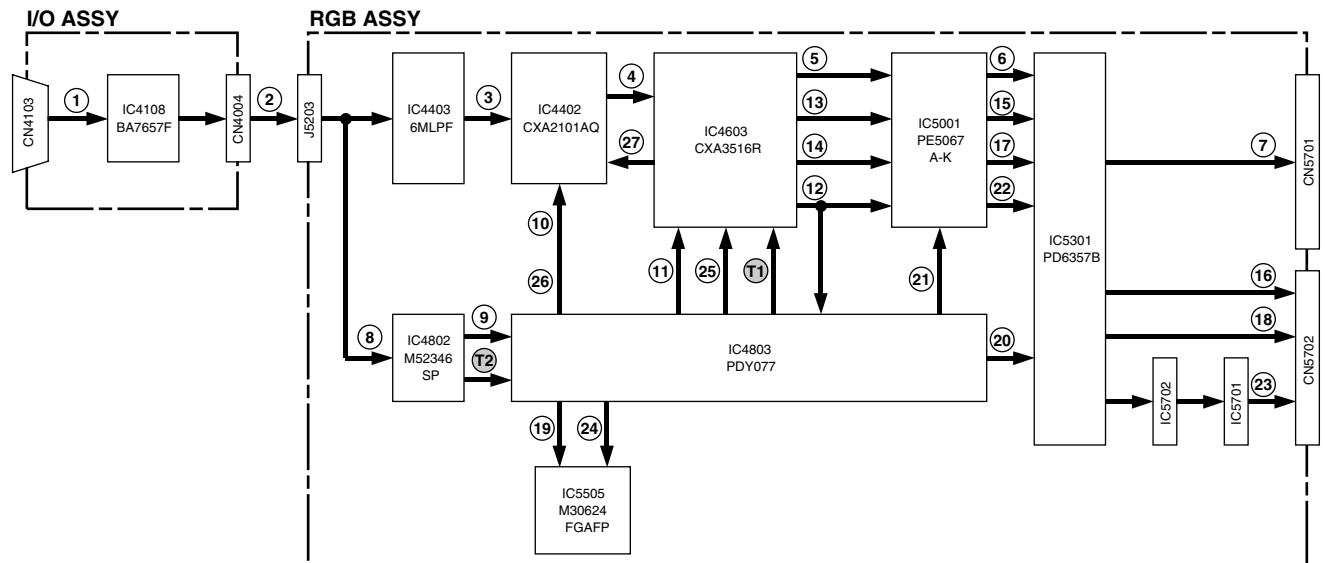


## RGB VIDEO Signal Waveforms

### Waveform at Power ON



### Measurement Point



### Trigger Signal

- Ⓣ1 K4805 (HD\_PLL) : For Horizontal Sync. Signal
- Ⓣ2 IC4802 - pin 13 : For Vertical Sync. Signal

### Measurement Condition

① to ②7 :

Input : INPUT 1 (Component)  
 Input Signal : 480i  
 Signal Pattern : H RAMP  
 Screen Mode : WIDE  
 Clamp Mode : AUTO  
 Color Mode : COLOR MODE 1

②8 to ②9 :

Input : INPUT 2 (RGBHV)  
 Input Signal : XGA@60Hz  
 Signal Pattern : Monoscope  
 Screen Mode : FULL  
 Clamp Mode : AUTO  
 Color Mode : COLOR MODE 1

③0 to ③1 :

Input : INPUT 5 (DVI)  
 Input Signal : XGA@60Hz  
 Signal Pattern : Monoscope  
 Screen Mode : FULL  
 Clamp Mode : AUTO  
 Color Mode : COLOR MODE 1

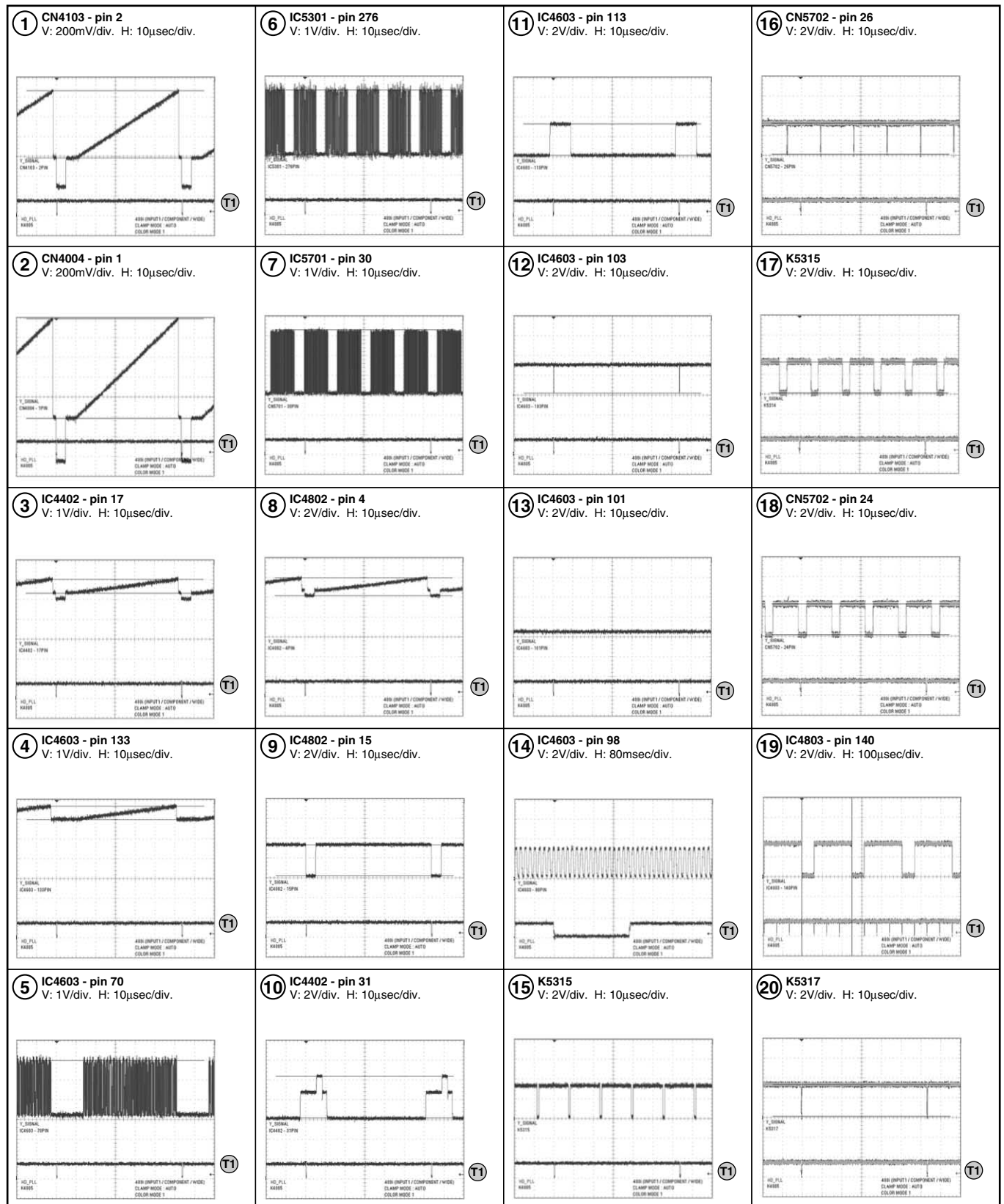
③2 to ③3 :

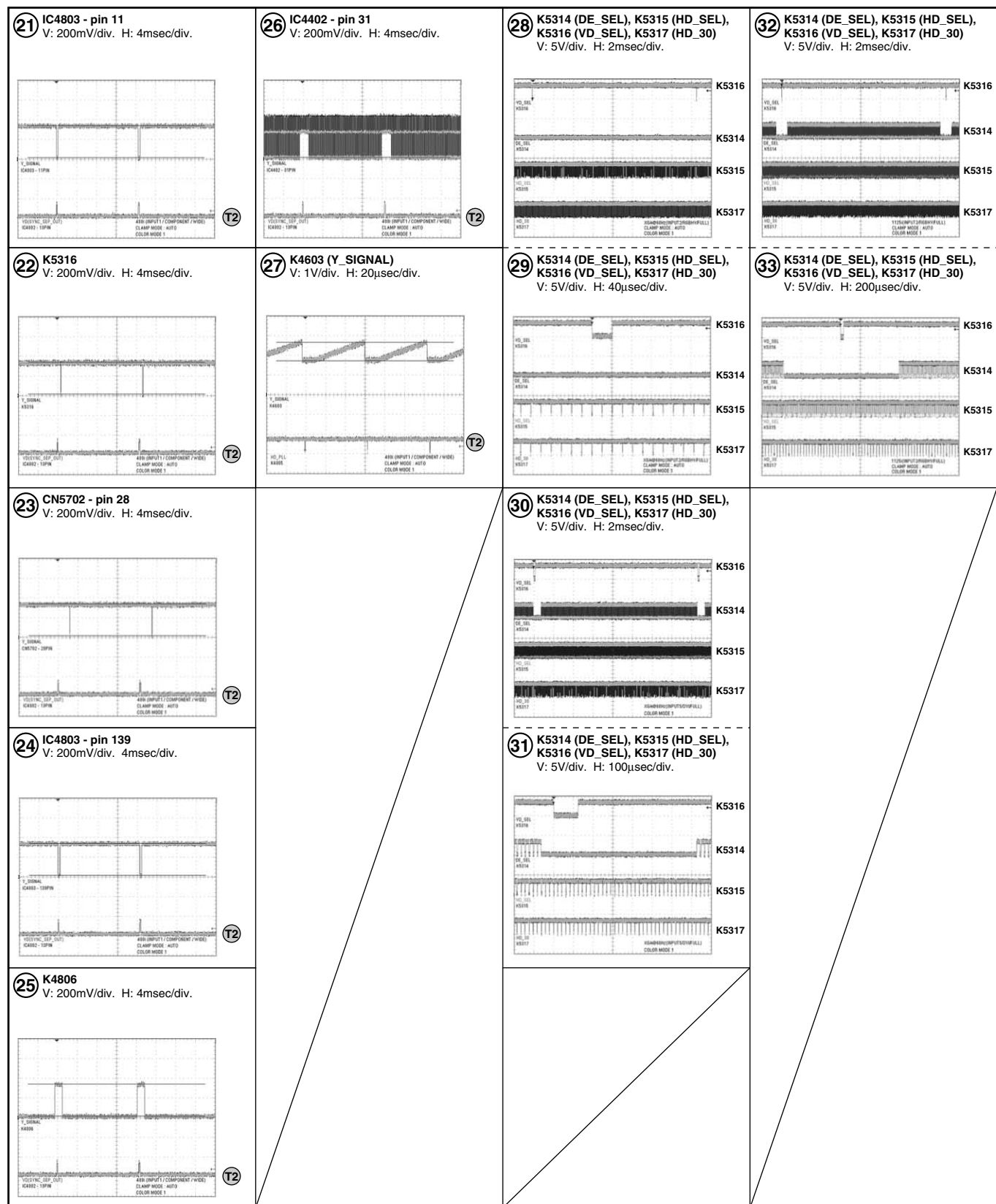
Input : INPUT 2 (RGBHV)  
 Input Signal : 1125i  
 Signal Pattern : Monoscope  
 Screen Mode : FULL  
 Clamp Mode : AUTO  
 Color Mode : COLOR MODE 1

# PDP-433CMX, PDP-433MXE

## ● Information

NO.	Point	Information	Trigger Signal (CH4)
1	CN4103 - pin 2	Synchronize with K4805 (HD_PLL)	T1
2	CN4004 - pin 1	Synchronize with K4805 (HD_PLL)	T1
3	IC4402 - pin 17	Synchronize with K4805 (HD_PLL)	T1
4	IC4603 - pin 133	Synchronize with K4805 (HD_PLL)	T1
5	IC4603 - pin 70	Synchronize with K4805 (HD_PLL)	T1
6	IC5301 - pin 276	Synchronize with K4805 (HD_PLL) and frequency is 4 times.	T1
7	IC5701 - pin 30	Do not synchronize with K4805 (HD_PLL)	T1
8	IC4802 - pin 4	Synchronize with K4805 (HD_PLL)	T1
9	IC4802 - pin 15	Synchronize with K4805 (HD_PLL)	T1
10	IC4402 - pin 31	Synchronize with K4805 (HD_PLL)	T1
11	IC4603 - pin 113	Synchronize with K4805 (HD_PLL)	T1
12	IC4603 - pin 103	Synchronize with K4805 (HD_PLL)	T1
13	IC4603 - pin 101	No output	T1
14	IC4603 - pin 98	Clock signal that synchronizes with K4805 (HD_PLL)	T1
15	K5315 (HD_SEL)	Synchronize with K4805 (HD_PLL) and frequency is 4 times.	T1
16	CN5702 - pin 26	Do not synchronize with K4805 (HD_PLL)	T1
17	K5314 (DE_SEL)	Synchronize with K4805 (HD_PLL) and frequency is 4 times.	T1
18	CN5702 - pin 24	Do not synchronize with K4805 (HD_PLL)	T1
19	IC4803 - pin 140	Synchronize with K4805 (HD_PLL) and frequency is 1/4 times.	T1
20	K5317 (HD_SEL)	Synchronize with K4805 (HD_PLL)	T1
21	IC4803 - pin 11	Synchronize with IC4802 - pin 13	T2
22	K5316 (VD_SEL)	Synchronize with IC4802 - pin 13	T2
23	CN5702 - pin 28	Synchronize with IC4802 - pin 13	T2
24	IC4803 - pin 139	Synchronize with IC4802 - pin 13	T2
25	K4806	Synchronize with IC4802 - pin 13	T2
26	IC4402 - pin 31	Synchronize with IC4802 - pin 13	T2
27	K4603 (Y_SIGNAL)	Synchronize with IC4802 - pin 13	T2
28	K5314 (DE_SEL)	K5314 (DE_SEL) is fixed to "L" level in the PC signal indication. K5315 (HD_SEL) and K5317 (HD _ 30) synchronize with K5316 (VD_SEL).	K5316 (VD_SEL)
	K5315 (HD_SEL)		
	K5316 (VD_SEL)		
	K5317 (HD_30)		
29	K5314 (DE_SEL)	Magnified K5316 (VD_SEL) section of No. 28. K5315 (HD_SEL) and K5317 (HD _ 30) are the same frequency in the PC signal indication.	K5316 (VD_SEL)
	K5315 (HD_SEL)		
	K5316 (VD_SEL)		
	K5317 (HD_30)		
30	K5314 (DE_SEL)	K5314 (DE_SEL) is not fixed to "L" level in the PC signal indication by the DVI input. K5314 (DE_SEL), K5315 (HD_SEL) and K5317 (HD_30) synchronize with K5316 (VD_SEL).	K5316 (VD_SEL)
	K5315 (HD_SEL)		
	K5316 (VD_SEL)		
	K5317 (HD_30)		
31	K5314 (DE_SEL)	Magnified K5316 (VD_SEL) section of No. 30. K5314 (DE_SEL), K5315 (HD_SEL) and K5317 (HD_30) are the same frequency in the PC signal indication by the DVI input.	K5316 (VD_SEL)
	K5315 (HD_SEL)		
	K5316 (VD_SEL)		
	K5317 (HD_30)		
32	K5314 (DE_SEL)	K5314 (DE_SEL) is not fixed to "L" level in the 1125i indication. K5314 (DE_SEL), K5315 (HD_SEL) and K5317 (HD _ 30) synchronize with K5316 (VD_SEL).	K5316 (VD_SEL)
	K5315 (HD_SEL)		
	K5316 (VD_SEL)		
	K5317 (HD_30)		
33	K5314 (DE_SEL)	Magnified K5316 (VD_SEL) section of No. 32. Frequency of 2 times of K5314 (DE_SEL), K5315 (HD_SEL) and K5317 (HD_30) in the 1125i indication.	K5316 (VD_SEL)
	K5315 (HD_SEL)		
	K5316 (VD_SEL)		
	K5317 (HD_30)		

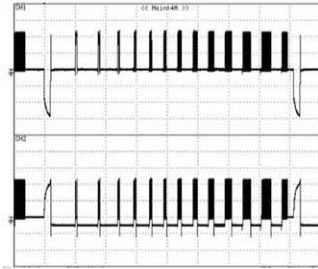




## Sustain Waveforms

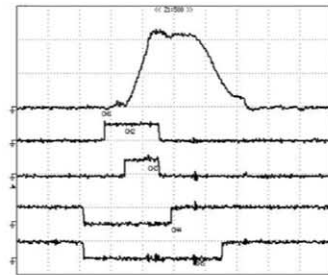
### ● Sustain Waveform (1 field)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)  
V: 100V/div. H: 2msec/div.  
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)  
V: 100V/div. H: 2msec/div.



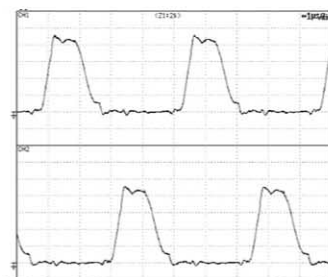
### ● Sustain Waveform

ch 1 : K2220 (Y.PSUS) - K2219 (SUSGND)  
V: 100V/div. H: 500nsec/div.  
ch 2 : K2028 (YSUS\_U) - K2024 (DGND)  
V: 10V/div. H: 500nsec/div.  
ch 3 : K2027 (YSUS\_B) - K2024 (DGND)  
V: 10V/div. H: 500nsec/div.  
ch 4 : K2029 (YSUS\_D) - K2024 (DGND)  
V: 10V/div. H: 500nsec/div.  
ch 5 : K2037 (YSUS\_G) - K2024 (DGND)  
V: 10V/div. H: 500nsec/div.



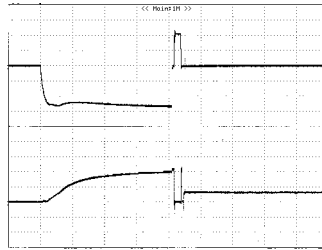
### ● Sustain Waveform (middle)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)  
V: 50V/div. H: 1μsec/div.  
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)  
V: 50V/div. H: 1μsec/div.



### ● Reset Waveform

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)  
V: 100V/div. H: 100μsec/div.  
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)  
V: 100V/div. H: 100μsec/div.



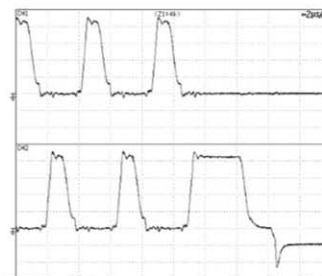
### ● Sustain Waveform (first half)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)  
V: 50V/div. H: 5μsec/div.  
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)  
V: 50V/div. H: 5μsec/div.



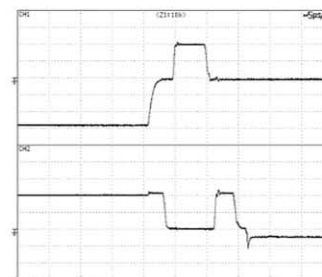
### ● Sustain Waveform (second half)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)  
V: 50V/div. H: 2μsec/div.  
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)  
V: 50V/div. H: 2μsec/div.



### ● Reset Waveform (second half)

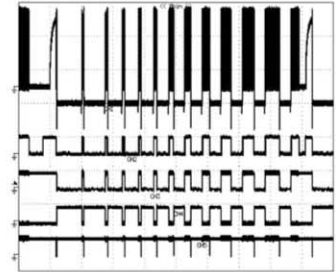
ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)  
V: 100V/div. H: 5μsec/div.  
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)  
V: 100V/div. H: 5μsec/div.



## Drive Pulse Waveforms

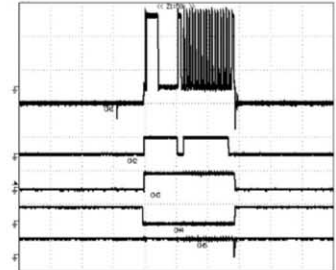
### ● Y Drive Pulse Control Waveform (1 field)

ch 1 : K2220 (Y.PSUS) - K2219 (SUSGND)  
V: 100V/div. H: 2msec/div.  
ch 2 : K2039 (YCP\_MSK) - K2024 (DGND)  
V: 10V/div. H: 2msec/div.  
ch 3 : K2040 (YSUS\_MSK) - K2024 (DGND)  
V: 10V/div. H: 2msec/div.  
ch 4 : K2041 (OFS) - K2024 (DGND)  
V: 10V/div. H: 2msec/div.  
ch 5 : K2053 (SOFT\_D) - K2024 (DGND)  
V: 10V/div. H: 2msec/div.



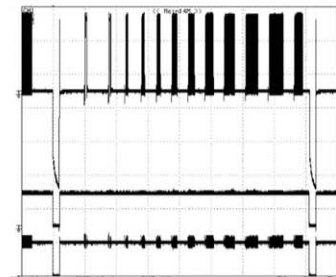
### ● Y Drive Pulse Control Waveform (1 sub-field)

ch 1 : K2220 (Y.PSUS) - K2219 (SUSGND)  
V: 100V/div. H: 50μsec/div.  
ch 2 : K2039 (YCP\_MSK) - K2024 (DGND)  
V: 10V/div. H: 50μsec/div.  
ch 3 : K2040 (YSUS\_MSK) - K2024 (DGND)  
V: 10V/div. H: 50μsec/div.  
ch 4 : K2041 (OFS) - K2024 (DGND)  
V: 10V/div. H: 50μsec/div.  
ch 5 : K2053 (SOFT\_D) - K2024 (DGND)  
V: 10V/div. H: 50μsec/div.



### ● X Drive Pulse Control Waveform (1 field)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)  
V: 100V/div. H: 2msec/div.  
ch 2 : K3017 (XCP\_MSK) - K3005 (DGND)  
V: 10V/div. H: 2msec/div.  
ch 3 : K3015 (XSUS\_MSK) - K3005 (DGND)  
V: 5V/div. H: 2msec/div.



## 5. PCB PARTS LIST

NOTES : ● Parts marked by “NSP” are generally unavailable because they are not in our Master Spare Parts List.

- The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by  $J = 5\%$ , and  $K = 10\%$ ).

560  $\Omega \rightarrow 56 \times 10^1 \rightarrow 561$  ..... RD1/4PU  $\begin{bmatrix} 5 & 6 & 1 \end{bmatrix} J$

47k  $\Omega \rightarrow 47 \times 10^3 \rightarrow 473$  ..... RD1/4PU  $\begin{bmatrix} 4 & 7 & 3 \end{bmatrix} J$

0.5  $\Omega \rightarrow R50$  ..... RN2H  $\begin{bmatrix} R & 5 & 0 \end{bmatrix} K$

1  $\Omega \rightarrow 1R0$  ..... RS1P  $\begin{bmatrix} 1 & R & 0 \end{bmatrix} K$

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k  $\Omega \rightarrow 562 \times 10^1 \rightarrow 5621$  ..... RN1/4PC  $\begin{bmatrix} 5 & 6 & 2 & 1 \end{bmatrix} F$

Mark	No.	Description	Part No.
<b>LIST OF ASSEMBLIES</b>			
NSP		SCAN FUKUGO ASSY	AWV1927
NSP	—	SCAN (A) ASSY	AWZ6666
NSP	—	SCAN (B) ASSY	AWZ6667
NSP	—	X CONNECTOR (A) ASSY	AWZ6672
NSP	—	X CONNECTOR (B) ASSY	AWZ6673
NSP	—	BRIDGE A ASSY	AWZ6674
NSP	—	BRIDGE B ASSY	AWZ6675
NSP	—	BRIDGE C ASSY	AWZ6676
NSP	—	BRIDGE D ASSY	AWZ6677
NSP		ADDRESS FUKUGO ASSY	AWV1928
NSP	—	ADR CONNECT A ASSY	AWZ6678
NSP	—	ADR CONNECT B ASSY	AWZ6679
NSP	—	ADR CONNECT C ASSY	AWZ6680
NSP	—	ADR CONNECT D ASSY	AWZ6681
NSP	—	ADR RESONANCE ASSY	AWZ6682
		X DRIVE ASSY	AWV1930
NSP		Y DRIVE ASSY	AWV1938
	—	SLOT CONNECTOR ASSY	AWZ6634
	—	Y DRIVE ASSY	AWZ6683
	—	SUB ADDRESS A ASSY	AWZ6692
	—	SUB ADDRESS B ASSY	AWZ6693
		DIGITAL VIDEO ASSY	AWV1941
		RGB VIDEO ASSY	AWV1939
	—	I/O ASSY	AWZ6631
	—	RGB ASSY	AWZ6697
		MX FUKUGO ASSY	AWV1905
	—	CONTROL ASSY	AWZ6633
	—	SP OUT L ASSY	AWZ6635
	—	SP OUT R ASSY	AWZ6636
	—	SIDE KEY ASSY	AWZ6637
	—	THERMAL SENSOR ASSY	AWZ6639
	—	MX LED ASSY	AWZ6642
	—	IR ASSY	AWZ6643
	—	MX AUDIO ASSY	AWZ6644
	—	KEY CONNECTOR ASSY	AWZ6695

Mark	No.	Description	Part No.
<b>SCAN (A) ASSY</b>			
<b>SEMICONDUCTORS</b>			
		IC6201-IC6206	SN755860PJ
<b>CAPACITORS</b>			
		C6201, C6202, C6212, C6213 (0.1 $\mu$ F/250V)	ACG1088
		C6222, C6223, C6232, C6233 (0.1 $\mu$ F/250V)	ACG1088
		C6242, C6243, C6252, C6253 (0.1 $\mu$ F/250V)	ACG1088
		C6203, C6205, C6206, C6210, C6215 C6219, C6220, C6227, C6229, C6231 C6235, C6236, C6240, C6244, C6246 C6251, C6255, C6259, C6260 C6262-C6266	CCSRCH151J50 CCSRCH151J50 CCSRCH151J50 CCSRCH151J50 CCSRCH151J50
		C6208, C6209, C6217, C6218, C6226 C6230, C6238, C6239, C6245, C6250 C6257, C6258 C6204, C6207, C6214, C6216 C6224, C6225, C6234, C6237	CCSRCH181J50 CCSRCH181J50 CCSRCH181J50 CCSRCH390J50 CCSRCH390J50
		C6248, C6249, C6254, C6256 C6211, C6221, C6228, C6241, C6247 C6261	CCSRCH390J50 CKSRFY104Z16 CKSRFY104Z16
<b>RESISTORS</b>			
		R6207, R6209, R6222, R6228, R6232 R6239 Other Resistors	RAB4C221J RAB4C221J RS1/16S□□□□
<b>OTHERS</b>			
		CN6201 15P CONNECTOR	AKP1218
		K6202, K6212, K6219, K6225, K6231 TEST PIN	AKX9002
		K6239, K6244 TEST PIN	AKX9002

Mark	No.	Description	Part No.
<b>SCAN (B) ASSY</b>			
<b>SEMICONDUCTORS</b>			
	IC6001-IC6006		SN755860PJ
<b>CAPACITORS</b>			
	C6001,C6002,C6011,C6012 (0.1μF/250V)		ACG1088
	C6021,C6022,C6031,C6032 (0.1μF/250V)		ACG1088
	C6041,C6042,C6051,C6052 (0.1μF/250V)		ACG1088
	C6004,C6005,C6009,C6013,C6015 C6020,C6026,C6027,C6029,C6033 C6038,C6040,C6044,C6048,C6049 C6054,C6058-C6060,C6062-C6066 C6007,C6008,C6014,C6019,C6025		CCSRCH151J50 CCSRCH151J50 CCSRCH151J50 CCSRCH151J50 CCSRCH181J50
	C6028,C6035,C6039,C6046,C6047 C6056,C6057 C6003,C6006,C6017,C6018 C6023,C6024,C6034,C6037,C6043 C6045,C6053,C6055		CCSRCH181J50 CCSRCH181J50 CCSRCH390J50 CCSRCH390J50 CCSRCH390J50
	C6010,C6016,C6030,C6036,C6050 C6061		CKSRYF104Z16 CKSRYF104Z16
<b>RESISTORS</b>			
	R6007,R6012,R6021,R6028,R6032 R6040 Other Resistors		RAB4C221J RAB4C221J RS1/16S□□□J
<b>OTHERS</b>			
	CN6001 15P CONNECTOR K6001,K6012,K6018,K6025,K6031 TEST PIN K6038,K6044 TEST PIN		AKP1218 AKX9002 AKX9002

**X CONNECTOR (A) ASSY**

<b>RESISTORS</b>			
	All Resistors		RS1/16S□□□J

**X CONNECTOR (B) ASSY**

<b>RESISTORS</b>			
	All Resistors		RS1/16S□□□J

**BRIDGE A ASSY**

<b>SEMICONDUCTOR</b>			
	D6421		D1FL20U(S)
<b>CAPACITOR</b>			
	C6421 (0.1μF/100V)		ACG1098
<b>OTHERS</b>			
	CN6421 PH CONNECTOR		B4B-PH-SM3

Mark	No.	Description	Part No.
<b>BRIDGE B ASSY</b>			
<b>SEMICONDUCTOR</b>			
	D6431		D1FL20U(S)
<b>CAPACITOR</b>			
	C6431 (0.1μF/100V)		ACG1098
<b>OTHERS</b>			
	CN6431 PH CONNECTOR		B4B-PH-SM3

**BRIDGE C ASSY**

<b>SEMICONDUCTOR</b>			
	D6441		D1FL20U(S)
<b>CAPACITOR</b>			
	C6441 (0.1μF/100V)		ACG1098
<b>OTHERS</b>			
	CN6441 PH CONNECTOR		B4B-PH-SM3

**BRIDGE D ASSY**

<b>SEMICONDUCTOR</b>			
	D6451		D1FL20U(S)
<b>CAPACITOR</b>			
	C6451 (0.1μF/100V)		ACG1098
<b>OTHERS</b>			
	CN6451 PH CONNECTOR		B4B-PH-SM3

**ADR CONNECT A ASSY**

<b>SEMICONDUCTORS</b>			
	IC6501		TC74VHC541FT
	Q6502		2SC2712
	Q6503		2SK209
	D6501		DA227
<b>COILS</b>			
	L6501,L6502 (22μH/0.11A)		ATH1081
<b>CAPACITORS</b>			
	C6504,C6513-C6520,C6528 (330pF/100V)		ACG1094
	C6531,C6533,C6534 (47μF/6.3V)		ACH1341
	C6536-C6538		CCSRCH121J50
	C6507-C6510,C6522-C6525,C6532		CKSRYF104Z16
	C6535		CKSRYF104Z16
<b>RESISTORS</b>			
	R6519-R6522,R6526,R6528		RAB4C100J
	R6530,R6531,R6534-R6537,R6541		RAB4C100J
	R6543,R6545,R6547		RAB4C100J
	R6516		RAB4C473J
	Other Resistors		RS1/16S□□□J

<b>OTHERS</b>			
	CN6501 55P CONNECTOR		AKM1202



# PDP-433CMX, PDP-433MXE

Mark	No.	Description	Part No.
<b>ADR CONNECT B ASSY</b>			
<b>SEMICONDUCTORS</b>			
	IC6601		TC74VHC541FT
	Q6602		2SC2712
	Q6603		2SK209
	D6601		DA227
<b>COILS</b>			
	L6601,L6602 (22μH/0.11A)		ATH1081
<b>CAPACITORS</b>			
	C6604,C6613-C6620,C6628 (330pF/100V)		ACG1094
	C6631,C6633,C6634 (47μF/6.3V)		ACH1341
	C6636-C6638		CCSRCH121J50
	C6607-C6610,C6622-C6625,C6632		CKSRYF104Z16
	C6635		CKSRYF104Z16
<b>RESISTORS</b>			
	R6619-R6622,R6626,R6628		RAB4C100J
	R6630,R6631,R6634-R6637,R6641		RAB4C100J
	R6643,R6645,R6647		RAB4C100J
	R6616		RAB4C473J
	Other Resistors		RS1/16S□□□J
<b>OTHERS</b>			
	CN6601 55P CONNECTOR		AKM1202

<b>ADR CONNECT C ASSY</b>			
<b>SEMICONDUCTORS</b>			
	IC6801		TC74VHC541FT
	Q6802		2SC2712
	Q6803		2SK209
	D6801		DA227
<b>COILS</b>			
	L6801,L6802 (22μH/0.11A)		ATH1081
<b>CAPACITORS</b>			
	C6804,C6813-C6820,C6828 (330pF/100V)		ACG1094
	C6831,C6833,C6834 (47μF/6.3V)		ACH1341
	C6836-C6838		CCSRCH121J50
	C6807-C6810,C6822-C6825,C6832		CKSRYF104Z16
	C6835		CKSRYF104Z16
<b>RESISTORS</b>			
	R6819-R6822,R6826,R6828		RAB4C100J
	R6830,R6831,R6834-R6837,R6841		RAB4C100J
	R6843,R6845,R6847		RAB4C100J
	R6816		RAB4C473J
	Other Resistors		RS1/16S□□□J
<b>OTHERS</b>			
	CN6801 55P CONNECTOR		AKM1202

Mark	No.	Description	Part No.
<b>ADR CONNECT D ASSY</b>			
<b>SEMICONDUCTORS</b>			
	IC6901		TC74VHC541FT
	Q6902		2SC2712
	Q6903		2SK209
	D6901		DA227
<b>COILS</b>			
	L6901,L6902 (22μH/0.11A)		ATH1081
<b>CAPACITORS</b>			
	C6904,C6913-C6920,C6928 (330pF/100V)		ACG1094
	C6931,C6933,C6934 (47μF/6.3V)		ACH1341
	C6936-C6938		CCSRCH121J50
	C6907-C6910,C6922-C6925,C6932		CKSRYF104Z16
	C6935		CKSRYF104Z16
<b>RESISTORS</b>			
	R6919-R6922,R6926,R6928		RAB4C100J
	R6930,R6931,R6934-R6937,R6941		RAB4C100J
	R6943,R6945,R6947		RAB4C100J
	R6916		RAB4C473J
	Other Resistors		RS1/16S□□□J
<b>OTHERS</b>			
	CN6901 55P CONNECTOR		AKM1202

<b>ADR RESONANCE ASSY</b>			
<b>SEMICONDUCTORS</b>			
△	IC6704		ICP-S1.0
	IC6701-IC6703		TND301S
	Q6704,Q6705,Q6712		2SB1132
	Q6701-Q6703		2SD1664
	Q6710,Q6711		FS30ASJ-2
	Q6706-Q6709		FX20ASJ-2
	D6701,D6703,D6704,D6706		1SS355
	D6709,D6710,D6717,D6718		D1FL20U(S)
	D6711-D6714		SPX-62S
	D6702,D6705,D6716		UDZ15B
<b>COIL</b>			
	L6704 CHOKE COIL		ATH1121
<b>CAPACITORS</b>			
	C6716,C6718 (1.00F)		ACE1159
	C6720,C6721 (0.1μF/100V)		ACG1101
	C6722 (0.0068F/100V)		ACG1102
	C6703-C6708 (56μF/80V)		ACH1347
	C6701,C6702,C6709		CEHV470M16
	C6710,C6711,C6713		CKSRYF104Z16
<b>RESISTORS</b>			
	All Resistors		RS1/16S□□□J
<b>OTHERS</b>			
	CN6701 23P CONNECTOR		AKP1221
	CN6702 PH CONNECTOR		B4B-PH-SM3
	CN6703 PH CONNECTOR		B5B-PH-SM3

Mark	No.	Description	Part No.
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**X DRIVE ASSY****[X LOGIC BLOCK]****SEMICONDUCTORS**

IC3003	PE1012A
IC3004	TC74ACT540FT
IC3001,IC3008	TC74ACT541FT

**COIL**

L3001	LFEA100J
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**CAPACITORS**

C3005	CEHAT470M16
C3001,C3003,C3004,C3006	CKSRYF104Z50

**RESISTORS**

R3009-R3012	RAB4C0R0J
R3001,R3003,R3026,R3029	RAB4C470J
R3002,R3005,R3030,R3033	RAB4C472J
Other Resistors	RS1/16S□□□J

**OTHERS**

CN3001	30P CONNECTOR	KF050HA30L
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**[X SUS BLOCK]****SEMICONDUCTORS**

IC3102	HCPL-M611
IC3200,IC3201	STK795-460
IC3101	TC74ACT541FT
IC3103,IC3104,IC3106,IC3107	TND301S
IC3110,IC3113	TND301S

IC3109	UPC78L05T
Q3117	2SJ181L
Q3116,Q3119,Q3120	2SJ522
Q3101	2SK2503
Q3103-Q3106,Q3109-Q3114	FS16VS-9

Q3124-Q3127	FS16VS-9
Q3123	FS2AS-14A
Q3122,Q3128	FS7VS-14A
Q3102,Q3118	HN1B04FU
D3119	1SS184

D3108,D3124,D3125,D3130,D3133	1SS355
D3101,D3102,D3117,D3126,D3131	D1FL40
D3200,D3202,D3203,D3205	D1FL40
D3207,D3208,D3210-D3215	D1FL40
D3120,D3127-D3129,D3135,D3136	UDZ15B

**COILS**

L3206,L3207	ATH1112
RADIAL LEAD INDUCTOR	
L3201,L3204	CHOKE COIL
L3202,L3205,L3210,L3211	ATH1113
CHOKE COIL	
L3101	LFEA100J
L3107,L3108	LFEA101J
L3103	LFEA470J

Mark	No.	Description	Part No.
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**CAPACITORS**

C3205,C3206,C3212,C3213 (1.5μF)	ACE1160
C3225,C3226 (1.5μF)	ACE1160
C3131,C3139,C3143 (0.1μF/630V)	ACG1092
C3223,C3224 (100pF/500V)	ACG1100
C3132 (47μF/350V)	ACH1346

C3200-C3202,C3207-C3209 (330μF/315V)	ACH1348
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C3214-C3221	CCSRCH331J50
C3112,C3133,C3203,C3210	CEHAT101M16
C3102,C3107,C3115,C3204,C3211	CEHAT101M25

C3101	CEHAT221M25
C3104,C3106,C3134,C3141	CEHAT470M16
C3135	CEHAT470M25
C3154,C3163	CKSRYB332K50
C3103,C3105,C3108,C3109,C3111	CKSRYF104Z50

C3113,C3114,C3117,C3130,C3140	CKSRYF104Z50
C3147	CKSRYF104Z50

**RESISTORS**

VR3200-VR3203 (1kΩ)	ACP1089
R3183,R3184,R3187	ACN1156
R3113,R3114,R3121,R3122,R3126	RAB4C100J
R3132,R3140,R3141	RAB4C100J
R3212,R3217,R3230,R3234,R3237	RS1/10S184J

R3240,R3242,R3245	RS1/10S184J
R3250-R3253	RS1/16S3300F
R3134,R3163	RS1/2S100J
R3103	RS1/2S102J
R3109	RS1/2S2R2J

R3102	RS1/2S561J
R3215,R3216	RS1MMF101J
R3228,R3229	RS1MMF122J
R3202,R3203	RS1MMF563J
R3178,R3179	RS2MMF181J

Other Resistors	RS1/16S□□□J
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**OTHERS**

KN3105-KN3114	GROUND PLATE	ANK-142
CN3101	13P PLUG	KM250MA13

**[X DD CON BLOCK]****SEMICONDUCTORS**

IC3712	AN1431M
IC3701	MIP161
IC3702-IC3704	TLP181(GR)
Q3701	2SC2712
Q3800	HN1A01FU

D3710,D3711	1SS355
D3705,D3706	D1FL20U(S)
D3702	EC8FS6
D3708,D3709,D3713	RD110P
D3703	UDZ18B

D3707	UDZS5.6B
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**COIL**

L3701	RADIAL LEAD INDUCTOR	ATH1110
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# PDP-433CMX, PDP-433MXE

Mark	No.	Description	Part No.
<b>TRANSFORMER</b>			
	T3701		ATK1153
<b>CAPACITORS</b>			
	C3701 (22μF/315V)		ACH1345
	C3717 (47μF/315V)		ACH1346
	C3704		CEHAT101M16
	C3706,C3711,C3714		CEHAT101M25
	C3712		CEHAT331M16
	C3705		CKSQYF104Z50
	C3703,C3707,C3708,C3710		CKSRYB104K16
	C3715,C3716		CKSRYB104K16
<b>RESISTORS</b>			
	VR3701 (1kΩ)		ACP1089
	R3732		RS1/16S1001F
	R3806		RS1/16S1802F
	R3701-R3704,R3706-R3717		RS1/16S1803F
	R3805		RS1/16S2702F
	R3731		RS1/16S3900F
	R3802		RS1/16S5601F
	R3738,R3739		RS1/2S102J
	R3800,R3801		RS1/2S823J
	Other Resistors		RS1/16S□□□□
<b>Y DRIVE ASSY</b>			
<b>[Y DRIVE LOGIC BLOCK]</b>			
<b>SEMICONDUCTORS</b>			
	IC2006		PE1013B
	IC2007		TC74ACT540FT
	IC2001,IC2003-IC2005		TC74ACT541FT
	Q2121		2SK2201
	Q2101,Q2102		HN1C01FU
	D2101		1SS355
<b>COIL</b>			
	L2001		LFEA100J
<b>CAPACITORS</b>			
	C2101		CEHAT100M50
	C2103		CEHAT1R0M50
	C2003		CEHAT470M16
	C2001,C2004,C2005,C2007,C2008		CKSRYF104Z50
	C2010,C2102,C2104,C2121		CKSRYF104Z50
<b>RESISTORS</b>			
	R2015-R2018		RAB4C0R0J
	R2001,R2002,R2005,R2011		RAB4C470J
	R2037,R2038		RAB4C470J
	R2035,R2036,R2039,R2040		RAB4C472J
	Other Resistors		RS1/16S□□□□
<b>OTHERS</b>			
	CN2001	50P CONNECTOR	AKM1201
	2101	SENSOR	AXX1057

Mark	No.	Description	Part No.
<b>[Y DRIVE SUS BLOCK]</b>			
<b>SEMICONDUCTORS</b>			
	IC2202,IC2208		HCPL-M611
	IC2206,IC2214		STK795-460
	IC2201		TC74ACT541FT
	IC2203,IC2204,IC2210,IC2212		TND301S
	IC2213,IC2216,IC2217		TND301S
	IC2205,IC2209		UPC78L05T
	Q2203-Q2205		2SJ522
	Q2201		2SK2503
	Q2215,Q2217-Q2221,Q2226,Q2227		FQB34N20
	Q2232,Q2233		FQB34N20
	Q2210-Q2212		FS16VS-9
	Q2209		HN1B04FU
	D2225		1SS184
	D2202,D2204		1SS226
	D2211		1SS355
	D2201		D1FL20U(S)
	D2203,D2205,D2208,D2210,D2212		D1FL40
	D2214-D2216,D2221-D2223		D1FL40
	D2226-D2228,D2239,D2243		D1FL40
	D2209		DF20L60
	D2206,D2207		UDZ15B
<b>COILS</b>			
	L2207 RADIAL LEAD INDUCTOR		ATH1110
	L2213,L2214		ATH1112
	RADIAL LEAD INDUCTOR		
	L2206,L2211 CHOKE COIL		ATH1113
	L2208,L2212,L2215,L2216		ATH1118
	CHOKE COIL		
	L2210		LFEA100J
	L2203,L2205		LFEA101J
	L2201,L2204		LFEA470J
<b>CAPACITORS</b>			
	C2228,C2230,C2231,C2250-C2252		ACE1160
	(1.5μF)		
	C2209,C2210 (0.1μF/630V)		ACG1092
	C2233,C2248 (100pF500V)		ACG1100
	C2211 (47μF/350V)		ACH1346
	C2216,C2217,C2219,C2234-C2236		ACH1348
	(330μF315)		
	C2253-C2260		CCSRCH331J50
	C2221,C2225,C2226,C2246		CEHAT101M16
	C2204,C2227,C2237,C2240,C2247		CEHAT101M25
	C2202		CEHAT221M25
	C2232		CEHAT331M2A
	C2218,C2224,C2229		CEHAT470M16
	C2212,C2214		CEHAT470M25
	C2264,C2270		CKSRYB472K50
	C2201,C2203,C2205,C2208,C2213		CKSRYF104Z50
	C2220,C2222,C2223,C2238,C2239		CKSRYF104Z50
	C2241,C2242		CKSRYF104Z50
<b>RESISTORS</b>			
	VR2201-VR2204 (1kΩ)		ACP1089
	R2235,R2273,R2291,R2305,R2315		RAB4C100J
	R2317,R2342		RAB4C100J
	R2253,R2256,R2270,R2283,R2332		RS1/10S184J
	R2338,R2354,R2355		RS1/10S184J

Mark	No.	Description	Part No.
	R2358-R2361		RS1/16S3300F
	R2263,R2264		RS1/2S100J
	R2203		RS1/2S102J
	R2209		RS1/2S2R2J
	R2202		RS1/2S561J
	R2278,R2303		RS1MMF101J
	R2233,R2234		RS1MMF152J
	R2274,R2275		RS1MMF471J
	R2298,R2299		RS2MMF3R3J
	R2277		RS3LMFR47J
	R2276		RS3LMFR56J
	Other Resistors		RS1/16S□□□□J

**OTHERS**

KN2201-KN2210	GROUND PLATE	ANK-142
CN2201	15P PLUG	KM250MA15
CN2202	3P PLUG	KM250MA3

**[Y DRIVE SCAN BLOCK]****SEMICONDUCTORS**

IC2501,IC2502,IC2505,IC2510	HCPL-M611
IC2514,IC2516,IC2525	HCPL-M611
IC2503,IC2504,IC2506	TC74ACT540FT

**COILS**

L2501-L2503	LFEA100J
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**CAPACITORS**

C2506,C2527	CEHAT220M2D
C2502	CEHAT221M16
C2524,C2525	CEHAT470M16
C2501,C2503-C2505,C2507,C2508	CKSRYF104Z50
C2513,C2517,C2519,C2530	CKSRYF104Z50

**RESISTORS**

R2502,R2504	RAB4C101J
Other Resistors	RS1/16S□□□□J

**OTHERS**

CN2501,CN2502	AKM1200
15P CONNECTOR	

**[Y DRIVE DD-CON BLOCK]****SEMICONDUCTORS**

IC2715-IC2717	AN1431M
IC2709	HCNR201
IC2708,IC2710,IC2718	M5223AFP
IC2711	MIP0223SC
IC2701	MIP161
IC2704	MIP301
IC2702,IC2703,IC2705-IC2707	TLP181(GR)
IC2712-IC2714	TLP181(GR)
Q2701,Q2703	2SC2712
Q2704	HN1A01FU
D2712,D2717,D2718,D2732,D2734	1SS355
D2736,D2737	1SS355
D2704,D2706,D2707,D2715,D2726	D1FL20U(S)
D2728	D1FL20U(S)
D2702,D2714,D2727	D1FL40

Mark	No.	Description	Part No.
	D2711		D1FS4
	D2725		EC8FS6
	D2733		RD110P
	D2724		U1ZB330
	D2713		U1ZB36
	D2740		UDZ12B
	D2709,D2716		UDZ3.6B
	D2729,D2731		UDZ33B
	D2703,D2710		UDZ36B
	D2720,D2730,D2739		UDZS5.6B

**COIL**

L2701	RADIAL LEAD INDUCTOR	ATH1110
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**TRANSFORMERS**

T2702	ATK1150
T2703	ATK1151
T2701	ATK1152

**CAPACITORS**

C2701,C2735 (22μF/315V)	ACH1345
C2706,C2725,C2737	CEHAT101M16
C2709,C2718,C2720,C2739,C2745	CEHAT101M25
C2708	CEHAT101M2A
C2740	CEHAT101M2C

C2704	CEHAT221M25
C2715	CEHAT331M16
C2746	CEHAT331M25
C2723,C2751	CEHAT470M16
C2712	CEHAT471M35

C2711	CKSRYB103K50
C2705,C2713,C2714,C2719	CKSRYB104K16
C2721,C2722,C2724,C2727,C2729	CKSRYB104K16
C2731,C2733,C2736,C2742,C2743	CKSRYB104K16
C2747-C2749	CKSRYB104K16

C2728,C2730	CKSRYB471K50
C2707,C2738	CKSRYF104Z50

**RESISTORS**

VR2702,VR2703 (1kΩ)	ACP1089
VR2701 (2.2kΩ)	ACP1090
R2735,R2791	RS1/16S1000F
R2780	RS1/16S1103F
R2715,R2728,R2733	RS1/16S1201F

R2787	RS1/16S1302F
R2766	RS1/16S1501F
R2785	RS1/16S1503F
R2777,R2786	RS1/16S1802F
R2776	RS1/16S2702F

R2705,R2706,R2709,R2710,R2778	RS1/16S3002F
R2781	RS1/16S3002F
R2783	RS1/16S4701F
R2734,R2736	RS1/16S4702F
R2779	RS1/16S5102F

R2773	RS1/16S5601F
R2784	RS1/16S5602F
R2782	RS1/16S6801F
R2744-R2746,R2748-R2753	RS1/16S9102F
R2711,R2716,R2767,R2770	RS1/2S102J

R2788,R2792	RS1/2S561J
R2771,R2772	RS1/2S823J
R2712	RS3LMF272J
Other Resistors	RS1/16S□□□□J

# PDP-433CMX, PDP-433MXE

Mark	No.	Description	Part No.
<b>SLOT CONNECTOR ASSY</b>			
<b>OTHERS</b>			
	CN8102	SOCKET 120P	AKP1219
	CN8101	PCI SOCKET 120P	AKP1220
	KN8101,KN8102	GROUND PLATE	ANK1664

## SUB ADDRESS A ASSY

### SEMICONDUCTORS

IC8801,IC8802,IC8804	M5223AFP
IC8803	TC74VHC74FT
Q8802	2SA1163
Q8804,Q8805,Q8808	2SC2712
Q8806	2SK209
D8801-D8803,D8809	1SS355
D8806,D8807	DA227
D8808	UDZ27B
D8804	UDZS5.1B

### COILS

L8801	CHOKO COIL (100μH/0.45A)	ATH1074
L8802,L8803	COIL (22μH/0.11A)	ATH1081

### CAPACITORS

C8806	CCSRCH101J50
C8822	CEHV100M16
C8804	CEHV100M35
C8808	CEHV470M16
C8807	CEVNP2R2M35
C8802,C8805,C8809-C8817	CKSRYF104Z16
C8820,C8821	CKSRYF104Z16

### RESISTORS

R8806,R8807,R8837,R8838,R8841	RS1/16S1002D
R8858	RS1/16S1202D
R8828,R8829,R8832,R8846,R8864	RS1/16S2202D
R8826,R8827,R8839,R8840	RS1/16S4701D
R8833	RS1/16S4702F
R8859	RS1/16S5602F
R8801,R8802	RS1/2S1R5J
R8803-R8805	RS1/2S2R2J
Other Resistors	RS1/16S□□□J

### OTHERS

CN8803	23P CONNECTOR	AKM1205
CN8801	PH CONNECTOR	S3B-PH-SM3
CN8802	PH CONNECTOR	S8B-PH-SM3

## SUB ADDRESS B ASSY

### SEMICONDUCTORS

IC8901,IC8902,IC8904	M5223AFP
IC8903	TC74VHC74FT
Q8902	2SA1163
Q8904,Q8905,Q8908	2SC2712
Q8906	2SK209
D8901-D8903,D8909	1SS355
D8906,D8907	DA227
D8908	UDZ27B
D8904	UDZS5.1B

Mark	No.	Description	Part No.
<b>COILS</b>			
	L8901	CHOKO COIL (100μH/0.45A)	ATH1074
	L8902,L8903	COIL (22μH/0.11A)	ATH1081

### CAPACITORS

C8906	CCSRCH101J50
C8922	CEHV100M16
C8904	CEHV100M35
C8908	CEHV470M16
C8907	CEVNP2R2M35
C8902,C8905,C8909-C8917	CKSRYF104Z16
C8920,C8921	CKSRYF104Z16

### RESISTORS

R8906,R8907,R8937,R8938,R8941	RS1/16S1002D
R8958	RS1/16S1202D
R8928,R8929,R8932,R8946,R8964	RS1/16S2202D
R8926,R8927,R8939,R8940	RS1/16S4701D
R8933	RS1/16S4702F
R8959	RS1/16S5602F
R8901,R8902	RS1/2S1R5J
R8903-R8905	RS1/2S2R2J
Other Resistors	RS1/16S□□□J

### OTHERS

CN8903	23P CONNECTOR	AKM1205
CN8901	PH CONNECTOR	S3B-PH-SM3
CN8902	PH CONNECTOR	S8B-PH-SM3

## DIGITAL VIDEO ASSY

### [INTERFACE BLOCK]

### SEMICONDUCTORS

IC1001-IC1008	TC74VHC541FT
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### FILTERS

F1001-F1006	EMI FILTER	ATF1194
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### CAPACITORS

C1001-C1008	CKSRYF104Z16
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### RESISTORS

R1044	RAB4C101J
R1001-R1007,R1036,R1063-R1069	RAB4C103J
R1008-R1017,R1019,R1020,R1027	RAB4C470J
R1032,R1034,R1035,R1037,R1038	RAB4C470J
R1040-R1043,R1048,R1049	RAB4C470J
R1051-R1054	RAB4C470J
Other Resistors	RS1/16S□□□J

### OTHERS

CN1003,CN1004	AKM1201
50P CONNECTOR	
K1001	AKX9002
TEST PIN	
CN1001	B12B-PH-SM3
PH CONNECTOR	

Mark	No.	Description	Part No.
<b>[PANEL UCOM BLOCK]</b>			
<b>SEMICONDUCTORS</b>			
	IC1101		HD64F2328VF
	IC1103		NC7SZ08P5
	IC1102		PST9228N
	Q1101,Q1103		DTC143EK
	D1101		AEL1171
<b>CAPACITORS</b>			
	C1123,C1124		CCSRCH7R0D50
	C1101		CEV101M4
	C1102,C1109,C1110,C1112-C1116		CKSRYB102K50
	C1129-C1132		CKSRYB102K50
	C1117,C1121		CKSRYB103K50
	C1120		CKSRYB472K50
	C1103-C1108,C1111,C1118,C1119		CKSRYF104Z16
	C1122,C1125-C1128		CKSRYF104Z16
<b>RESISTORS</b>			
	R1104,R1107,R1110,R1113,R1114		RAB4C472J
	R1116,R1121,R1124,R1127,R1129		RAB4C472J
	R1128		RD1/4PU473J
	Other Resistors		RS1/16S□□□J
<b>OTHERS</b>			
	K1101-K1104,K1107,K1108		AKX9002
	TEST PIN		
	X1101	CERAMIC RESONATOR	ASS1160
		(25MHz)	
<b>[MODULE UCOM BLOCK]</b>			
<b>SEMICONDUCTORS</b>			
	IC1204		24LC04B(I)SN
	IC1208		PST9246N
	IC1202		TC74VHC08FT
	IC1201		TC74VHC21FT
	IC1205		TC74VHC541FT
	IC1203		TC74VHCT541AFT
	IC1206		TC7W126FU
	D1201,D1202		1SS355
<b>CAPACITORS</b>			
	C1213,C1243-C1245		CCSRCH470J50
	C1235,C1236		CCSRCH7R0D50
	C1225,C1232		CEV470M6R3
	C1201-C1203,C1206-C1211		CKSRYB102K50
	C1214-C1216,C1218,C1219		CKSRYB102K50
	C1223,C1224,C1226,C1227,C1229		CKSRYB102K50
	C1237,C1238,C1241,C1242,C1247		CKSRYB102K50
	C1234		CKSRYB103K50
	C1233		CKSRYB472K50
	C1204,C1205,C1212,C1217		CKSRYF104Z16
	C1221,C1222,C1228,C1230,C1231		CKSRYF104Z16
	C1239,C1240,C1246,C1248-C1250		CKSRYF104Z16
<b>RESISTORS</b>			
	R1209,R1214,R1245		RAB4C101J
	R1242		RAB4C103J
	R1207		RAB4C123J
	R1213,R1216		RAB4C473J
	Other Resistors		RS1/16S□□□J

Mark	No.	Description	Part No.
<b>OTHERS</b>			
	X1201	CERAMIC RESONATOR	ASS1159
		(16MHz)	
	CN1203	PH CONNECTOR	B3B-PH-SM3
	CN1201,CN1202	8P PLUG	CKS3130
<b>[DIGITAL BLOCK]</b>			
<b>SEMICONDUCTORS</b>			
	IC1802		FS781BZB
	IC1704		NC7SZ08P5
	IC1301,IC1401		PD6358A
	IC1703		PE5064A
	IC1501,IC1502,IC1601,IC1602		TC74VCX541FT
	IC1702,IC1801		TC74VHC541FT
	IC1803		TC74VHC74FT
	IC1701		TC74VHCT541AFT
	D1301-D1305		1SS226
<b>FILTERS</b>			
	F1301-F1304,F1501-F1505		ATF1194
		EMI FILTER	
	F1601-F1605	EMI FILTER	ATF1194
<b>CAPACITORS</b>			
	C1807		CCSRCH271J50
	C1802		CEV100M16
	C1306,C1322,C1406,C1422,C1711		CEV101M4
	C1806		CEV101M4
	C1504-C1508,C1604-C1608,C1712		CKSRYB102K50
	C1303-C1305,C1307-C1321		CKSRYF104Z16
	C1323-C1336,C1403-C1405		CKSRYF104Z16
	C1407-C1421,C1423-C1436,C1501		CKSRYF104Z16
	C1503,C1601,C1603,C1701-C1710		CKSRYF104Z16
	C1713,C1803-C1805		CKSRYF104Z16
<b>CAPACITORS</b>			
	R1502,R1517,R1606,R1622		RAB4C101J
	R1307,R1310-R1315,R1317,R1318		RAB4C220J
	R1321,R1322,R1326-R1344,R1407		RAB4C220J
	R1410-R1415,R1417,R1418		RAB4C220J
	R1421,R1422,R1426-R1444		RAB4C220J
	R1501,R1514,R1607,R1627,R1701		RAB4C470J
	R1703-R1709,R1712-R1717		RAB4C470J
	R1551,R1552		RS1/2S680J
	Other Resistors		RS1/16S□□□J
<b>OTHERS</b>			
	X1801	CRYSTAL RESONATOR	ASS1146
		(50.000MHz)	
	CN1701	50P CONNECTOR	AKM1201
	CN1501,CN1502,CN1504,CN1505	55P CONNECTOR	AKM1202
	CN1601,CN1602,CN1604,CN1605	55P CONNECTOR	AKM1202
	K1301,K1302,K1308,K1311-K1314	TEST PIN	AKX9002
	K1316,K1321,K1324,K1326-K1331	TEST PIN	AKX9002

# PDP-433CMX, PDP-433MXE

Mark	No.	Description	Part No.
	K1333,K1501,K1502,K1601,K1602	TEST PIN	AKX9002
	K1728,K1729	TEST PIN	AKX9002
	CN1503,CN1603	PH CONNECTOR	B8B-PH-SM3
	CN1301	8P PLUG	CKS3130
	CN1702	30P CONNECTOR	KF050HA30L

## [D-D CONVERTER BLOCK]

### SEMICONDUCTORS

Q1902,Q1905,Q1907	2SC2712
Q1903	DTC143EK
Q1901,Q1904,Q1906	HN1C01FU
D1903-D1906,D1911,D1912	1SS355
D1908	HZU2.2B
D1902,D1909	UDZ3.6B
D1907	UDZS5.1B
D1901	UDZS6.8B

### CAPACITORS

C1904,C1906,C1912	CEV220M16
C1901-C1903,C1905,C1907-C1911	CKSRYF104Z16

### RESISTORS

R1935,R1936	RS1/2S680J
Other Resistors	RS1/16S□□□□

### OTHERS

K1901-K1906	TEST PIN	AKX9002
1901	DC-DC CONVERTER	AXY1054
CN1901	PH CONNECTOR	B13B-PH-SM3

## I/O ASSY

### [I/O BLOCK]

### SEMICONDUCTORS

IC4003	PQ05DZ11
IC4002	PQ09DZ11
IC4004	PQ12DZ11
IC4005,IC4006	PQ3DZ13
IC4001	TA79L05F

### CAPACITORS

C4027	CEHAT100M50
C4012,C4020,C4024	CEHAT101M10
C4008	CEHAT101M16
C4001,C4004,C4005,C4009,C4013	CEHAT470M16
C4016,C4017	CEHAT470M16
C4002,C4003,C4006,C4007	CKSRYF104Z16
C4010,C4011,C4014,C4015	CKSRYF104Z16
C4018,C4019,C4022,C4023	CKSRYF104Z16
C4026	CKSRYF105Z10

### RESISTORS

R4001,R4003,R4004,R4007	RS1MMF1R0J
R4002	RS1MMF8R2J

### OTHERS

CN4002	15P PLUG	KM200NA15
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Mark	No.	Description	Part No.
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## [RGB I/O BLOCK]

### SEMICONDUCTORS

IC4110	24LCS21A
IC4108	BA7657F
IC4107,IC4111	LT1399CS
IC4104	TA7630P
IC4103,IC4105	TC4052BF
IC4109	TC74VHCT541AFT
IC4101,IC4102	UPC4570G2
Q4114	2SC2412K
Q4102	DTA143EK
Q4103,Q4117	DTC143EK
Q4104-Q4106,Q4108,Q4111,Q4112	HN1B04FU
Q4101,Q4113	HN1C01FU
Q4115,Q4116	UMY1N
D4111	1SS184
D4105-D4107,D4114-D4116	1SS226
D4119,D4120	1SS226
D4121	1SS352
D4110	RD6.8MB
D4108,D4109,D4112,D4113	UDZS5.6B
D4122,D4123	UDZS5.6B

### SWITCH

S4101	ASH1029
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### CAPACITORS

C4144,C4145,C4155,C4156	CCSRCH220J50
C4109,C4117	CCSRCH221J50
C4166	CEHAT100M50
C4137,C4161,C4169	CEHAT101M10
C4120,C4124,C4135,C4136	CEHAT470M16
C4139,C4140,C4143,C4150	CEHAT470M16
C4153,C4154,C4157,C4174-C4176	CEHAT470M16
C4167	CEHAT4R7M50
C4101,C4104,C4106,C4110,C4111	CKSQYB105K10
C4114,C4118,C4127,C4165	CKSQYB105K10
C4170,C4171	CKSQYB105K10
C4129,C4130,C4133,C4134,C4142	CKSRYB103K50
C4149,C4151,C4152,C4177-C4179	CKSRYB103K50
C4108,C4116	CKSRYB222K50
C4146	CKSRYB471K50
C4125,C4126	CKSRYB472K50
C4107,C4119,C4121-C4123,C4128	CKSRYF104Z16
C4147,C4158-C4160,C4162-C4164	CKSRYF104Z16
C4168,C4180-C4182	CKSRYF104Z16

### RESISTORS

R4188-R4190	RS1/16S1001F
R4271-R4273	RS1/16S1101F
R4185,R4186,R4213,R4214	RS1/16S2201F
R4165,R4166,R4180,R4210-R4212	RS1/16S75R0F
R4262,R4263	RS1/2S750J
Other Resistors	RS1/16S□□□□

### OTHERS

CN4101,CN4102	AKN1069
STEREO MINI JACK	
CN4103,CN4104	D-SUB SOCKET
CN4105	BNC SOCKET
	AKP1214
	AKX1055

Mark	No.	Description	Part No.
<b>RGB ASSY</b>			
<b>[MATRIX BLOCK]</b>			
<b>SEMICONDUCTORS</b>			
	IC4402	CXA2101AQ	
	IC4403	ML6426CS-1	
	IC4404	NJM072BM-E	
	Q4407-Q4409	2SA1037K	
	Q4413	2SC2412K	
	Q4412	HN1A01FU	
	Q4404	HN1B04FU	
	Q4410	HN1C01FU	
	D4401	1SS226	

**CAPACITORS**

C4406, C4412, C4458	CEHAT100M50
C4405	CEHAT101M16
C4456	CEHAT470M16
C4437, C4451-C4453	CKSQYB105K10
C4407, C4409, C4410, C4428, C4429	CKSQYB474K16
C4431, C4432, C4434-C4436, C4445	CKSQYB474K16
C4448	CKSQYB474K16
C4421-C4423, C4426	CKSRYB104K16
C4408	CKSRYB222K50
C4411, C4414-C4418, C4420, C4424	CKSRYF104Z16
C4427, C4430, C4433, C4438-C4444	CKSRYF104Z16
C4446, C4447, C4449, C4450, C4455	CKSRYF104Z16
C4457	CKSRYF104Z16

**RESISTORS**

R4422, R4425, R4426	RAB4C103J
R4483	RS1/16S1003F
R4476	RS1/16S1004F
R4448	RS1/16S2202F
R4437	RS1/16S2204F
R4494	RS1/16S3901F
R4482	RS1/16S4701F
R4455	RS1/16S4702F
R4489	RS1/16S5601F
Other Resistors	RS1/16S□□□□J

**[AD/PLL/AMP BLOCK]****SEMICONDUCTORS**

IC4603	CXA3516R
IC4605	NJM072BM-E
IC4604	TC74HC4066AF
IC4601	TC74LCX125FT
IC4602	TC7WH04FU
Q4601, Q4602	2SC2412K
Q4608	2SK208
Q4607	DTC124EK
Q4604-Q4606	HN1B04FU
Q4603	HN1C01FU
D4601-D4605	1SS355

**CAPACITORS**

C4623	CCSRCH101J50
C4615, C4680	CCSRCH220J50
C4626, C4669	CCSRCH221J50
C4620	CCSRCH331J50
C4604, C4607, C4614, C4638	CEHAT101M10

Mark	No.	Description	Part No.
	C4651,C4652,C4656,C4668		CEHAT101M10
	C4622		CFTLA105J50
	C4662		CKSRYB102K50
	C4608,C4619,C4627,C4628		CKSRYB104K16
	C4634,C4635,C4639,C4640		CKSRYB104K16
	C4610,C4647		CKSRYB105K6R3
	C4675		CKSRYB184K10
	C4601,C4605,C4606,C4609		CKSRYF104Z16
	C4611-C4613,C4616-C4618		CKSRYF104Z16
	C4624,C4625,C4629-C4633		CKSRYF104Z16
	C4636,C4637,C4641-C4646		CKSRYF104Z16
	C4648-C4650,C4653-C4655		CKSRYF104Z16
	C4657-C4661,C4663,C4677-C4679		CKSRYF104Z16

**RESISTORS**

R4612, R4623, R4625, R4629, R4632	RAB4C101J
R4636, R4639, R4641, R4643, R4647	RAB4C101J
R4653, R4657	RAB4C101J
R4635	RN1/16SE3001D
R4630	RS1/16S2201F
R4676, R4715	RS1/16S2204F
R4626	RS1/16S2701F
R4631	RS1/16S3301F
VR4701 (4.7kΩ)	ACP1091
Other Resistors	RS1/16S□□□□J

**[SYNC CONTROL BLOCK]****SEMICONDUCTORS**

IC4802	M52346SP
IC4801	NJM2234M
IC4803	PDY077E
Q4806	2SC2412K
Q4808, Q4809	DTC124EK
Q4803	HN1A01FU
Q4807	HN1B04FU
Q4802	HN1C01FU
D4807, D4808	1SS184
D4801, D4802	1SS226

**FILTERS**

F4801, F4802	EMI FILTER	ATF1194
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**CAPACITORS**

C4863, C4864	CCSRCH151J50
C4801, C4805	CCSRCH220J50
C4821, C4833	CCSRCH221J50
C4804	CCSRCH470J50
C4807, C4810, C4823	CEHAT100M50
C4812, C4844	CEHAT101M10
C4803, C4806, C4815	CEHAT470M16
C4817, C4822	CEHAT4R7M50
C4816	CKSQYB105K10
C4829	CKSRYB472K50
C4802, C4808, C4811, C4813, C4814	CKSRYF104Z16
C4819, C4820, C4830, C4831, C4836	CKSRYF104Z16
C4839, C4842, C4843, C4850, C4861	CKSRYF104Z16
C4860	CKSRYF105Z10



# PDP-433CMX, PDP-433MXE

Mark	No.	Description	Part No.
<b>RESISTORS</b>			
	R4814,R4818,R4835,R4915		RAB4C101J
	R4913		RAB4C102J
	R4809		RAB4C152J
	R4825		RAB4C471J
	R4808,R4943		RAB4C472J
	R4864		RS1/16S1802F
	R4865		RS1/16S2702F
	R4868		RS1/16S4702F
	Other Resistors		RS1/16S□□□J

## OTHERS

K4801,K4802,K4805,K4806	AKX9002
TEST PIN	
K4809,K4810 TEST PIN	AKX9002
CN4801 8P PLUG	CKS3130

## [IP BLOCK]

### SEMICONDUCTORS

IC5101,IC5103	MS82V16520-8GA
IC5102	PE5066A
IC5001	PE5067A

### CAPACITORS

C5017,C5121	CCSRCH220J50
C5006	CEHAT101M10
C5015,C5016	CEHAT221M6R3
C5001-C5005,C5007-C5013	CKSRYF104Z16
C5101-C5120	CKSRYF104Z16

### RESISTORS

All Resistors	RS1/16S□□□J
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## OTHERS

5002	HEATSINK FOR IC	ANH1574
5001	HEAT SINK L FOR IC	ANH1576

## [DIGITAL SELECT BLOCK]

### SEMICONDUCTORS

IC5201-IC5207	TC74LCX541FT
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### CAPACITORS

C5201-C5207	CKSRYF104Z16
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### RESISTORS

R5213	RAB4C103J
R5201-R5212,R5215,R5217	RAB4C470J
Other Resistors	RS1/16S□□□J

## OTHERS

J5203	10P HOUSING WIRE	ADX2706
J5204	11P HOUSING WIRE	ADX2781
CN5201	120P PLUG	AKM1203

Mark	No.	Description	Part No.
<b>[IC30 BLOCK]</b>			

### SEMICONDUCTORS

IC5302,IC5303	MS82V16520-8GA
IC5301	PD6357B

### CAPACITORS

C5301,C5308	CEHAT101M10
C5302-C5307,C5309-C5322,C5324	CKSRYF104Z16

### RESISTORS

All Resistors	RS1/16S□□□J
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## OTHERS

K5314-K5317 TEST PIN	AKX9002
X5301 CRYSTAL RESONATOR (100.00MHz)	ASS1161

## [MAIN UCOM BLOCK]

### SEMICONDUCTORS

IC5502	24LC64(I)SN
IC5504,IC5509	74VHCT00AMTC
IC5512	LM50CIM3
IC5505	M30624FGAFP
IC5511	M5223AFP

IC5510	PST9246N
IC5503	TC74VHC541FT
IC5501	TC74VHCT541AFT
IC5506,IC5507	TC7W126FU
Q5501	2SJ461

Q5502,Q5503	DTA143EK
Q5504	HN1A01FU

### CAPACITORS

C5512,C5513,C5521,C5534	CCSRCH220J50
C5526,C5527	CCSRCH7R0D50
C5545	CEHAT100M50
C5528,C5533	CEHAT470M16
C5507,C5508,C5511,C5518,C5522	CKSRYB102K50

C5529-C5531,C5536,C5537	CKSRYB102K50
C5535,C5538,C5539	CKSRYB221K50
C5524	CKSRYB472K50
C5525	CKSRYF103Z50
C5502-C5505,C5509,C5514-C5517	CKSRYF104Z16

C5519,C5520,C5523,C5532	CKSRYF104Z16
C5542-C5544	CKSRYF105Z10

### RESISTORS

R5503,R5509,R5510	RAB4C101J
R5535	RAB4C103J
R5504,R5526	RAB4C473J
R5569	RS1/16S1001F
R5571	RS1/16S1800F
R5566	RS1/16S3001F
R5563	RS1/16S5101F
Other Resistors	RS1/16S□□□J

## OTHERS

CN5506 30P PLUG	AKM1204
K5501,K5502,K5508-K5510,K5512	AKX9002
TEST PIN	
K5515,K5516,K5518 TEST PIN	AKX9002
X5501 CERAMIC RESONATOR (16MHz)	ASS1159
CN5501,CN5502 8P PLUG	CKS3130

Mark	No.	Description	Part No.
<b>[WIDE UCOM BLOCK]</b>			
<b>SEMICONDUCTORS</b>			
	IC5601		HD64F2328VF
	IC5604		NC7SZ08P5
	IC5603		PST9228N
	IC5605		TC7SH32FU
	IC5607,IC5608		TC7WH74FU
<b>CAPACITORS</b>			
	C5601		CCSRCH102J50
	C5615,C5616		CCSRCH7R0D50
	C5611		CKSRYB472K50
	C5612		CKSRYF103Z50
	C5604,C5606,C5608,C5610,C5613		CKSRYF104Z16
	C5617-C5619		CKSRYF104Z16
<b>RESISTORS</b>			
	R5603,R5604		RAB4C103J
	Other Resistors		RS1/16S□□□J
<b>OTHERS</b>			
	X5601	CERAMIC RESONATOR ASS1160 (25MHz)	
<b>[DIGITAL I/F BLOCK]</b>			
<b>SEMICONDUCTORS</b>			
	IC5701		TC7WH123FU
	IC5702		TC7WH74FU
	D5701		1SS352
<b>CAPACITORS</b>			
	C5703		CCSRCH471J50
	C5701,C5702		CKSRYF104Z16
<b>RESISTORS</b>			
	R5701-R5707,R5709,R5712-R5719		RAB4C101J
	R5721		RAB4C101J
	R5730		RS1/16S1003F
	Other Resistors		RS1/16S□□□J
<b>OTHERS</b>			
	CN5701,CN5702		AKM1201
	50P CONNECTOR		

**MX AUDIO ASSY****[MX AUDIO BLOCK]****SEMICONDUCTORS**

IC8601	BA5417
Q8602	2SA1037K
Q8603,Q8605,Q8607	2SC2412K
Q8606	DTC143EK
Q8601	HN1B04FU
Q8604	RN1901

**COILS**

L8602,L8603	AF CHOKE COIL	ATH-059
L8601	CHIP CHOKE COIL	ATH9003

Mark	No.	Description	Part No.
<b>CAPACITORS</b>			
	C8602,C8617		CEAT101M16
	C8606,C8607		CEAT101M25
	C8610		CEAT221M16
	C8605,C8613,C8614		CEAT470M35
	C8609,C8615,C8622		CEAT471M25
	C8611,C8618		CEAT4R7M50
	C8612,C8619		CKSQYF105Z16
	C8616,C8621		CKSRYB103K50
	C8625		CKSRYB222K50
	C8623,C8624		CKSRYB473K50
	C8601,C8608		CKSRYF103Z50
<b>RESISTORS</b>			
	R8633,R8634		RD1/2MMF100J
	R8625,R8632		RD1/2MMF152J
	R8624,R8631		RD1/4MUF100J
	Other Resistors		RS1/16S□□□J
<b>[FAN DRIVE BLOCK]</b>			
<b>SEMICONDUCTORS</b>			
	IC8703		74VHCT00AMTC
	IC8702		M5223AFP
	IC8701		PQ20WZ11
	Q8702		2SC2712
	Q8701		HN1A01FU
<b>CAPACITORS</b>			
	C8703		CEAT100M50
	C8704,C8707,C8711		CEAT101M16
	C8708,C8709,C8712		CEAT470M35
	C8706,C8710		CKSRYF104Z16
	C8705		CKSRYF105Z10
<b>RESISTORS</b>			
	R8715-R8717,R8720		RS1/16S1001F
	R8703		RS1/16S3001F
	R8707		RS1/16S5101F
	R8712		RS1/16S8200F
	R8710		RS3LMF2R7J
	Other Resistors		RS1/16S□□□J
<b>OTHERS</b>			
	CN8704,CN8705	CONNECTOR 3P	B3B-ZR-3.4
	CN8703	PH CONNECTOR	B6B-PH-SM3

**CONTROL ASSY****SEMICONDUCTORS**

IC8001	DS14C232CM
IC8002	TC74HC00AF
Q8002	2SC2712
Q8001	HN1A01FU
Q8003	RN1901
D8009,D8010	1SS355
D8001-D8008	UDZ15B

**COIL**

L8001	LCTA221J3225
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# PDP-433CMX, PDP-433MXE

Mark	No.	Description	Part No.
<b>CAPACITORS</b>			
	C8001,C8002,C8005,C8006		CEAT1R0M50
	C8003,C8010		CEAT470M16
	C8004,C8007,C8008		CKSRYB103K50
	C8009		CKSRYB472K50
<b>RESISTORS</b>			
	R8006		RAB4C102J
	Other Resistors		RS1/16S□□□J
<b>OTHERS</b>			
	CN8001,CN8002	MINI JACK	AKN1070
	CN8003	9P D-SUB SOCKET	AKP1213
	CN8004,CN8005		AKP1215
		6P MINI DIN SOCKET	
	CN8007	PH CONNECTOR	B6B-PH-SM3

## SP OUT L ASSY

### SEMICONDUCTORS

IC8151	LM50CIM3
IC8152	M5223AFP
Q8151	HN1A01FU

### COILS

L8151,L8152	CHOKE COIL	ATH1073
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### CAPACITORS

C8163,C8164	CCSRCH101J50
C8154	CCSRSL221J50
C8162	CEAT470M16
C8159	CKSRYB103K50
C8151,C8153	CKSRYB332K50
C8155	CKSRYB472K50
C8157,C8161	CKSRYF104Z16
C8158,C8160	CKSRYF105Z10
C8152	CKSRYF473Z50

### RESISTORS

R8153,R8154	RD1/2MMF100J
R8164	RS1/16S1001F
R8160	RS1/16S1800F
R8165	RS1/16S3001F
R8159	RS1/16S5101F
Other Resistors	RS1/16S□□□J

### OTHERS

CN8151	2P SPEAKER TERMINAL	AKE1041
CN8152	PH CONNECTOR	B6B-PH-SM3

Mark	No.	Description	Part No.
<b>SP OUT R ASSY</b>			

### COILS

L8176,L8177	CHOKE COIL	ATH1073
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### CAPACITORS

C8182,C8183	CCSRCH101J50
C8179	CCSRSL221J50
C8176,C8178	CKSRYB332K50
C8180	CKSRYB472K50
C8177	CKSRYF473Z50

### RESISTORS

R8178,R8179	RD1/2MMF100J
Other Resistors	RS1/16S□□□J

### OTHERS

CN8176	2P SPEAKER TERMINAL	AKE1041
CN8177	PH CONNECTOR	B3B-PH-SM3

## SIDE KEY ASSY

### SWITCHES

S8251-S8261	ASG1088
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### OTHERS

CN8251	8P FFC CONNECTOR	AKM1207
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## THERMAL SENSOR ASSY

### SEMICONDUCTORS

IC8351	LM50CIM3
IC8352	M5223AFP

### CAPACITORS

C8356	CEV470M6R3
C8354	CKSRYB103K50
C8351,C8355	CKSRYF104Z16
C8352,C8353	CKSRYF105Z10

### RESISTORS

R8354,R8358	RS1/16S1001F
Other Resistors	RS1/16S□□□J

## MX LED ASSY

### SEMICONDUCTOR

D8501	AEL1170
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### OTHERS

CN8501	PH CONNECTOR	S3B-PH-SM3
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Mark	No.	Description	Part No.
<b>IR ASSY</b>			
<b>SEMICONDUCTORS</b>			
	Q8551		2SC2712
	D8552		1SS226
	D8551		1SS355
<b>CAPACITORS</b>			
	C8551		CEV470M6R3
	C8553		CKSQYB472K50
	C8552		CKSRYB103K50
	C8554		CKSRYF104Z16
<b>RESISTORS</b>			
	All Resistors		RS1/16S□□□J
<b>OTHERS</b>			
	8551	REMOTE RECEIVER UNIT	GP1UM26RK

**KEY CONNECTOR ASSY**

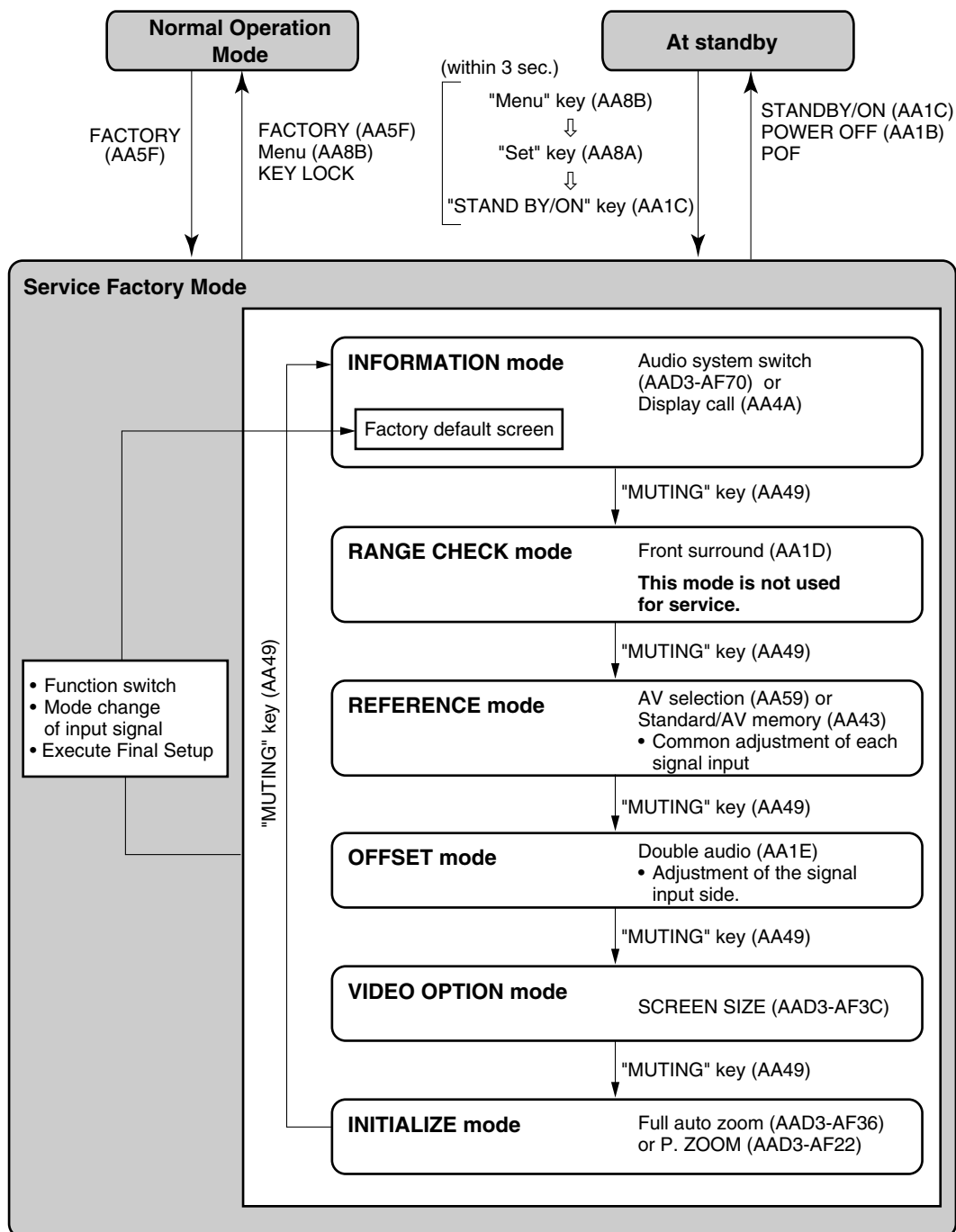
<b>SEMICONDUCTORS</b>			
	IC8301		PD5719A
	Q8301		2SC2712
	D8304-D8310		1SS226
	D8301,D8303		1SS355
	D8302		RD3.0MB
<b>CAPACITORS</b>			
	C8303		CEAT2R2M50
	C8304		CKSRYB103K50
	C8301,C8302,C8305		CKSRYB472K50
<b>RESISTORS</b>			
	R8315		RAB4C182J
	Other Resistors		RS1/16S□□□J
<b>OTHERS</b>			
	CN8302	8P FFC CONNECTOR	AKM1207
	CN8301	PH CONNECTOR	B4B-PH-SM3
	X8301	CERALOCK (3.84MHz)	ASS1162

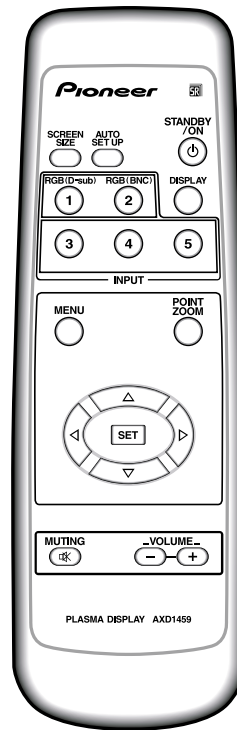
## 6. ADJUSTMENT

### 6.1 SERVICE FACTORY MODE

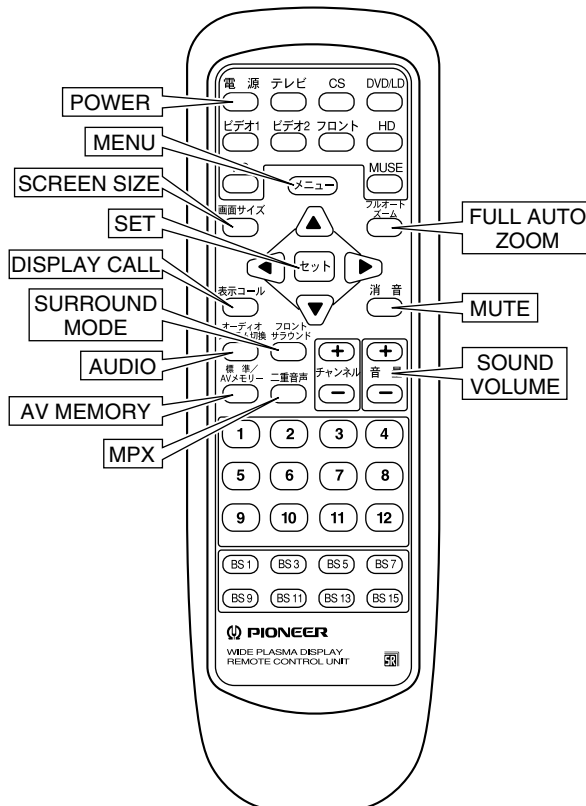
Perform the operations of Service Factory mode using the Remote Control Unit provided with the Plasma Display (AXD1459).

#### 6.1.1 State Transition Diagram

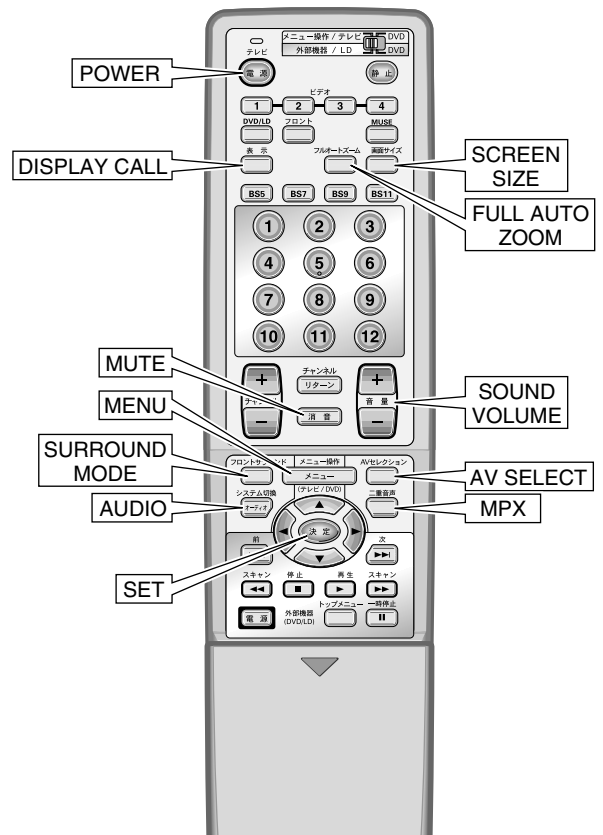




• AXD1459  
(PDP-503CMX / PDP-433CMX)



• AXD1432  
(PDP-501HD)



• AXD1673  
(PDP-502HD)

## ■ Caution of Operation of the Remote Control Unit

- In the service factory mode, use the key which does not exist in a remote control unit (AXD1459) attached to this product as the direct selection key of item when selects each item. These keys can use with the attached remote control units (AXD1432 and AXD1673) in the PDP-501HD and PDP-502HD.
- When operate the service factory mode with the attached remote control unit in this product, selection is possible with the following key cyclically.
  - Large item selection: MUTE key
  - Selection except large item: UP (▲), DOWN (▼) keys

## ■ Operation When Entered the Service Factory Mode

### ① Setting value of menu mode

- Reset "PICTURE" item (center value).
  - Notes : Adjustment value of "PICTURE" to reset is limited to the following face.
    - At VIDEO: Current signal mode of the selected input function
    - At PC: Correspond to the history of the signal mode input into past, "Table A to H".
- Reset all "SCREEN" items (center value).
  - Note: Adjustment value of "SCREEN" to reset is limited to the current signal mode of the selected input function.
  - Supplement: If execute FINAL SET UP or PICTURE DEFAULT, minimize the adjustment value of menu mode here so that it becomes the center value.
- "SET UP" and "OPTION" of menu mode are maintained except items as follows.
  - COLOR TEMP: It becomes "MIDDLE" setting
  - AUTO POWER OFF/POWER MANAGEMENT: Setting is maintained, but do not work

### ② Adjustment value of the integrator mode

- Adjustment values of "PICTURE" and "WHITE BAL" select the adjustment values which are applicable to the current input function signal mode.
  - Notes : Adjustment value of "PICTURE" and "WHITE BAL" to reset is limited to the following face.
    - At VIDEO: Current signal mode of the selected input function
    - At PC: Correspond to the history of the signal mode input into past, "Table A to H".
- SCREEN setting value is maintained.
- "SET UP" and "OPTION" of integrator menu are maintained except items as follows.
  - SIDE MASK LEVEL: Adjustment value is reset, and it becomes default value.
  - FULL MASK which was set with the integrator mode: Release
  - OFF TIMER: Release
- COLOR MODE (integrator menu) setting maintains setting in the integrator menu.

### ③ Others

- When input signal mode changed, change setting, and display default screen (INFORMATION-VERSION) of the service factory mode. Maintain the service factory mode.
  - Note: At a point in time when the input signal mode changed, perform an operation of ① and ②.
- Switch it in selected FUNCTION when switched FUNCTION. Then display default screen (INFORMATION-VERSION) of the service factory mode, and maintain the service factory mode.
  - Note: At the point that switched FUNCTION, perform an operation of ① and ②.
- Perform COLOR DETECT setting with "COLOR SYSTEM" of set menu mode.
- Only address 0100-01FF of module microcomputer / EEPROM copy/updates the data to the module microcomputer area of main microcomputer EEPROM.
- Various protection feature of the panel (Still picture detection, Block brightness detection and SCAN IC protection feature) turns OFF.
  - Notes: When each protection feature turns OFF once and released the factory mode, maintain it. Protection feature turns ON by turning ON from POWER OFF. Therefore turn ON from POWER OFF by all means in order to operate protection feature when released the factory mode.
- In the no input, apply playback and non-correspondence PC signal input, accepts only the setting item that does not depend on a signal mode. (But refer to the item "MASK1 and MASK2" about MASK setting.)
  - An item depending on the signal mode turns the display color to gray and it cannot change the setting.

## 6.1.2 Adjustment Items Table of Service Factory

## SLOT

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range (OFFSET Reference Value)
CD	YDL	Y-DELAY	YDL	REF/OFS-SLOT-1	0 to 15 [8]
	YOUTLEV	Y-OUT LEVEL	YOL	REF/OFS-SLOT-2	0 to 63 [32]
	TINT	CD TINT	CTI	REF/OFS-SLOT-3	0 to 63 [32]
	CrOFFSET	CDR OFFSET	CDR	REF/OFS-SLOT-4	0 to 15 [8]
	CbOFFSET	CDB OFFSET	CDB	REF/OFS-SLOT-5	0 to 15 [8]
EXP	R-Y_LEVEL	R-Y LEVEL	LRY	REF/OFS-SLOT-6	0 to 255 [128]
	B-Y_LEVEL	B-Y LEVEL	LBY	REF/OFS-SLOT-7	0 to 255 [128]

## RGB1

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range (OFFSET Reference Value)
MATRIX	PICTURE	MAT CONT	MCT	REF/OFS-RGB1-1	0 to 63 [32]
	BRIGHT	MAT BRIGHT	MBR	REF/OFS-RGB1-2	0 to 63 [32]
	COLOR	MAT COLOR	MCL	REF/OFS-RGB1-3	0 to 63 [32]
	HUE	MAT TINT	MTI	REF/OFS-RGB1-4	0 to 63 [32]
AD	MAINCONTRAST	AD MAIN CONT	MCA	REF/OFS-RGB1-5	0 to 255 [128]
	SUBRCONTRAST	AD R HIGH	GHA	REF/OFS-RGB1-6	0 to 255 [128]
	SUBGCONTRAST	AD G HIGH	BHA	REF/OFS-RGB1-7	0 to 255 [128]
	SUBBCONTRAST	AD B HIGH	RHA	REF/OFS-RGB1-8	0 to 255 [128]
	BRIGHTR	AD R LOW	GLA	REF/OFS-RGB1-9	0 to 255 [128]
	BRIGHTG	AD G LOW	BLA	REF/OFS-RGB1-10	0 to 255 [128]
	BRIGHTB	AD B LOW	RLA	REF/OFS-RGB1-11	0 to 255 [128]

## RGB2

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range (OFFSET Reference Value)
IC102 W/B	COLOR	COLOR	COL	REF/OFS-RGB2-1	0 to 255 [128]
	TINT	TINT	TNT	REF/OFS-RGB2-2	0 to 255 [128]
IC30 W/B	MCONTRAST	CONTRAST	CNT	REF/OFS-RGB2-3	0 to 255 [128]
	MBRIGHT	BRIGHT	BRT	REF/OFS-RGB2-4	0 to 255 [128]
	R HIGH	R. HIGH	RHI	REF/OFS-RGB2-5	0 to 255 [255]
	G HIGH	G. HIGH	GHI	REF/OFS-RGB2-6	0 to 255 [255]
	B HIGH	B. HIGH	BHI	REF/OFS-RGB2-7	0 to 255 [255]
	R LOW	R. LOW	RLW	REF/OFS-RGB2-8	0 to 255 [128]
	G LOW	G. LOW	GLW	REF/OFS-RGB2-9	0 to 255 [128]
	B LOW	B. LOW	BLW	REF/OFS-RGB2-10	0 to 255 [128]

## DIGITAL

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range (OFFSET Reference Value)
DIGITAL	PANEL R-HIGH	PANEL R-HIGH	PRH	REF/OFS-DIGITAL-1	0 to 255 [255]
	PANEL G-HIGH	PANEL G-HIGH	PGH	REF/OFS-DIGITAL-2	0 to 255 [255]
	PANEL B-HIGH	PANEL B-HIGH	PBH	REF/OFS-DIGITAL-3	0 to 255 [255]
	PANEL R-LOW	PANEL R-LOW	PRL	REF/OFS-DIGITAL-4	0 to 999 [512]
	PANEL G-LOW	PANEL G-LOW	PGL	REF/OFS-DIGITAL-5	0 to 999 [512]
	PANEL B-LOW	PANEL B-LOW	PBL	REF/OFS-DIGITAL-6	0 to 999 [512]
	ABL LEVEL	ABL LEVEL	ABL	REF/OFS-DIGITAL-7	0 to 255 [128]
	X-SUS-B	X-SUS-B	XSB	REF-DIGITAL-8	4 to 12
	X-SUS-G	X-SUS-G	XSG	REF-DIGITAL-9	4 to 12
	Y-SUS-B	Y-SUS-B	YSB	REF-DIGITAL-10	4 to 12
	Y-SUS-G	Y-SUS-G	YSG	REF-DIGITAL-11	4 to 12
	V-SUS	V-SUS	VSU	REF-DIGITAL-12	0 to 255
	V-OFFSET	V-OFFSET	VOF	REF-DIGITAL-13	0 to 255

## SIDE MASK LEVEL (VIDEO OPTION)

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range (OFFSET Reference Value)
IC30	R SIDE MASK LEV	R SIDE MASK LEV	RSL	VOP-M LEV-1	0 to 255
	G SIDE MASK LEV	G SIDE MASK LEV	GSL	VOP-M LEV-2	0 to 255
	B SIDE MASK LEV	B SIDE MASK LEV	BSL	VOP-M LEV-3	0 to 255



## COLOR TEMP (VIDEO OPTION)

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range (OFFSET Reference Value)
IC102	COLOR	COLOR		VOP-CT-3	0 to 255 [128]
	TINT	TINT		VOP-CT-4	0 to 255 [128]
IC30	MCONTRAST	CONTRAST		VOP-CT-1	0 to 255 [128]
	MBRIGHT	BRIGHT		VOP-CT-2	0 to 255 [128]
	R HIGH	R. HIGH		VOP-CT-5	0 to 255 [255]
	G HIGH	G. HIGH		VOP-CT-6	0 to 255 [255]
	B HIGH	B. HIGH		VOP-CT-7	0 to 255 [255]
	R LOW	R. LOW		VOP-CT-8	0 to 255 [128]
	G LOW	G. LOW		VOP-CT-9	0 to 255 [128]
	B LOW	B. LOW		VOP-CT-10	0 to 255 [128]

## COLOR MODE2 (VIDEO OPTION)

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range (OFFSET Reference Value)
IC102	COLOR	COLOR		VOP-CM2-3	0 to 255 [128]
	TINT	TINT		VOP-CM2-4	0 to 255 [128]
IC30	MCONTRAST	CONTRAST		VOP-CM2-1	0 to 255 [128]
	MBRIGHT	BRIGHT		VOP-CM2-2	0 to 255 [128]
	R HIGH	R. HIGH		VOP-CM2-5	0 to 255 [255]
	G HIGH	G. HIGH		VOP-CM2-6	0 to 255 [255]
	B HIGH	B. HIGH		VOP-CM2-7	0 to 255 [255]
	R LOW	R. LOW		VOP-CM2-8	0 to 255 [128]
	G LOW	G. LOW		VOP-CM2-9	0 to 255 [128]
	B LOW	B. LOW		VOP-CM2-10	0 to 255 [128]

## ■ Calculation of Adjustment Value in the Service Factory Mode

- As for the adjustment value in the service factory mode, it becomes an actual adjustment value that subtracted OFFSET reference value (value in [ ] of the above table) from the value that added a REFERENCE adjustment value and an OFFSET adjustment value.  
Notes: It becomes the adjustment value the value that adjusted it with REFERENCE because there is not an OFFSET adjustment value as for R SIDE MASK LEV, G SIDE MASK LEV and B SIDE MASK LEV of item SIDE MASK LEVEL and X-SUS-B, X-SUS-G, Y-SUS-B, Y-SUS-G, V-SUS and V-OFFSET of item DIGITAL.
- As for COLOR MODE2 and COLOR TEMP, it becomes OFFSET value of each the value that subtracted OFFSET reference value (a value in [ ] of the above table) from a adjustment value of selected mode. It becomes a adjustment value of the last RGB 2 device (IC30 and IC102) the value that added this OFFSET value to each adjustment item of RGB 2.

## ■ Actual Calculation Example

- Each adjustment value of SLOT/ RGB 1/RGB2/DIGITAL  
(REFERENCE value)  
+  
{ (OFFSET value) – [OFFSET reference value] } ... Calculation of a value to add as OFFSET
- COLOR MODE2 OFFSET value  
{ (COLOR MODE2 adjustment value) - [OFFSET reference value] } ... Calculation of a value to add as OFFSET for COLOR MODE2  
Note: Add it only in COLOR MODE2 selection.
- COLOR TEMP OFFSET value  
{ (COLOR TEMP adjustment value) - [OFFSET reference value] } ... Calculation of a value to add as OFFSET for COLOR TEMP  
Note: Add it only in COLOR TEMP 1,2,4 and 5 selection.

Perform the addition in the normal operation, menu mode and COLOR TEMP adjustment mode of the service factory mode (in item VIDEO OPTION), and add OFFSET value of selected setting.

COLOR TEMP OFFSET does not add it in order to work by COLOR TEMP 3 setting in the integrator mode and in the service factory mode except COLOR TEMP adjustment mode.

### 1. In Adjustment Item

	1	5	10	15	20	25	30	32
1	OFS-SLOT			#1-S1-IN4-04-2*NT				
5								
10								
15	Y-DELAY			:***(***)				
16								

Halftone : Blue (second row/15th row  
for each 1 to 32 columns)

When there is not item which is applicable to the input signal mode, display the adjustment value with "———" (———), and perform the item indication color to gray.

- Second row / 2th to 12th columns : Display the upper layer of selection item • • • At the Service factory mode
- Second row / 2th to 3th columns : Display the ID No. • • • At the RS-232C factory mode
- Second row / 5th to 12th columns : Display the upper layer of selection item • • • At the RS-232C factory mode
- Second row / 15th to 16th columns : Current color mode setting
- Second row / 18th to 19th columns : Current slot type

Slot Type or Model Type	At PDA-5002 is mounted with	PDP-503PRO and PRO-1000HD	Outside Product Slot	No SLOT
Display	S1	US	T1 to T8	NO

- Second row / 21th to 23th columns : Current function
  - Second row / 25th to 28th columns : Current signal mode
  - Second row / 28th columns : Current Screen size (Refer to the "classification of input signal" with regard to each numeric value.)
- Current signal mode displays the signal mode of any of mode 03, mode 31, mode E1, mode 61 or mode 71.

Setting	Signal Mode Display
VIDEO	03
VGA	31
WVGA	E1
XGA	61
WXGA	71

Current signal mode displays the signal mode of any of mode 12 or mode 13.

HDTV Mode Setting (Integrator Menu)	Signal Mode Display
1080i	12
1035i	13

Display in the no signal and non-correspondence signal

Signal Mode Display	Signal Definition
FB	OUT OF RANGE (The signal that the measurement is impossible with the main microcomputer)
FC	OUT OF RANGE (In the video card when video signal does not input)
FD	OUT OF RANGE (In the non-correspondence signal at DVI input)
FE	OUT OF RANGE (When the measurement is possible with the main microcomputer, and non-correspondence signal that is not applicable to FC and FD)
FF	No signal

- Second row / 29th column : Current input form

Input Form	Component	Video-RGB	Composite	Y/C
Display	#	@	*	/

Non-display excepting above form (blank).

- Second row / 30th to 31th columns : Current color system

Color System	NTSC	PAL	SECAM	4.43NTSC	PAL-M	PAL-N	BLACK/WHITE
Display	NT	PL	SC	4N	PM	PN	BW

Non-display it (blank) when a case except COLOR SYSTEM mentioned above and COLOR SYSTEM setting is fixed.

- 15th row / 2th to 20th columns : Current item selection

- 15th row / 22th to 31th columns :

**RANGE CHECK selection** : Current selecting value

1. At REFERENCE selection : Adjustment value
2. At OFFSET selection : OFFSET value ( adjustment value ) \* Adjustment value is REFERENCE value + OFFSET value.
3. At VIDEO OPTION selection : No display
- At INITIALIZE selection : The setting that is selected. (There is no display in the item which there is the lower layer.)

## 2. INFORMATION

- **Basic Operation**

- Display the state of each item

- **Operating specification**

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### 3. OSD Display in INFORMATION

#### ① VERSION

1	5	10	15	20	25	30	32
1	I	N	F	O			
5							
10							
15							
16							

#### ② PD INFO.

1	5	10	15	20	25	30	32
1	I	N	F	O			
5							
10							
15							
16							

Display the power down point (1st or 1st, 2nd) and an hour meter of the time.

Perform display to maximum eight times, and if display became more than eight times, perform clear in order from the old information, and update it to the latest information.

#### Display details at PD INFORMATION

Display	PD Point	Display	PD Point
X-DRV	X-DRIVE	ADRES	ADDRESS junction
X-DDC	X-DC/DC CONVERTER	ADR-K	ADDRESS resonance
Y-DRV	Y-DRIVE	POWER	Power supply
Y-DDC	Y-DC/DC CONVERTER	DC-DC	DC/DC CONVERTER (DIGITAL)

#### ③ NG INFO.

1	5	10	15	20	25	30	32
1	I	N	F	O			
5							
10							
15							
16							

#### ④ TEMPERATURE

- Each display is the value of A/D input or D/A output of the microcomputer (0 to 255).
- Temperature sensor 1, 2 and 3
- FAN

⑤ MEMO

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#### 4. REFERENCE

Display color : White  
Halftone : Blue (Second row / 15th row  
for each 1th to 32th columns)

- **Basic Operation**

- Select the adjustment table.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	RGB1	Select the adjustment table		○
AA02	2	RGB2			○
AA03	3	DIGITAL			○
AA04	4	SLOT			○
AA05	5				
AA06	6				
AA07	7				
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select the upper item			
AA97	▼	Select the lower item			
AA94	»				
AA95	«				
AA8A	SET	Select the item and shift to lower layer			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment /setting screen	OFFSET		

- Operating specification

- Start from RGB 1 (Key 1) when shifted to this setting screen.  
However, the movement original item to be selected when shifted from the lower layer.
- When each key was pressed, follow the required operation.
- In INPUT5 (DVI) selection, impossible "RGB1" and "SLOT" selections (do not perform the display skip).
- When SLOT is not inserted and the external SLOT is inserted, selection of "SLOT" is impossible (do not perform the display skip).
- When selection of the item is impossible, turn the OSD display color into gray.

# PDP-433CMX, PDP-433MXE

## ① REFERENCE — RGB1

1	5	10	15	20	25	30	32
1	REF	RGB1		#1	S1	IN4	02-2*NT
5							
10							
15	MAT	CONT					
16							

Display color : White  
 Half tone : Blue (second row / 15th row for each 1 to 32th columns)

### ●Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remark	Lower Layer
AA01	1	MAT CONT	Call the adjustment value and display it.		×
AA02	2	MAT BRIGHT			×
AA03	3	MAT COLOR			×
AA04	4	MAT TINT			×
AA05	5	AD MAIN CONT			×
AA06	6	AD R HIGH			×
AA07	7	AD G HIGH			×
AA08	8	AD B HIGH			×
AA09	9	AD R LOW			×
AA00	10	AD G LOW			×
AA46	11	AD B LOW			×
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	»	Adjustment value of the parameter selecting goes up.			
AA95	«	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	OFFSET		

### ●Operating specification

- Start from MAT CONT (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- When there is not the item which is applicable to an input signal mode, display the adjustment value to "———", and turn the item display color into gray.

## ② REFERENCE — RGB2

1	5	10	15	20	25	30	32
1	REF - RGB2			# 1 - S 1 - I N 4 - 0 2 - 2 * N T			
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15	CONTRAST			: * * *			
16							

Display color : White  
 Half tone : Blue (second row / 15th row for  
 each 1 to 32th columns)

## ●Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	CONTRAST	Call the adjustment value and display it.		×
AA02	2	BRIGHT			×
AA03	3	COLOR			×
AA04	4	TINT			×
AA05	5	R HIGH			×
AA06	6	G HIGH			×
AA07	7	B HIGH			×
AA08	8	R LOW			×
AA09	9	G LOW			×
AA00	10	B LOW			×
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	»	Adjustment value of the parameter selecting goes up.			
AA95	«	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70	AUDIO	Shift to various adjustment / setting screen.	INFORMATION		
AA4A	DISPLAY CALL		RANGE CHECK		
AA1D	SURROUND MODE		REFERENCE		
AA59	AV SELECT		OFFSET		
AA43	AV MEMORY		VIDEO OPTION		
AA1E	MPX		INITIALIZE		
AAD3-AF3C	SCREEN SIZE				
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM				
AA49	MUTING	Shift to next adjustment / setting screen.	OFFSET		

## ●Operating specification

- Start from CONTRAST (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- When there is not the item which is applicable to an input signal mode, display the adjustment value to "\_\_\_\_\_", and turn the item display color into gray.



# PDP-433CMX, PDP-433MXE

## ③ REFERENCE — DIGITAL

1	5	10	15	20	25	30	32
1	REF	DIG		#1	S1	IN4	02-2*NT
5							
10							
15	PANEL	R-HIGH		:	*	*	*
16							

Display color : White  
 Half tone : Blue (second row / 15th row for  
 each 1 to 32th columns)

### ●Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	PANEL R-HIGH	Call the adjustment value and display it.		×
AA02	2	PANEL G-HIGH			×
AA03	3	PANEL B-HIGH			×
AA04	4	PANEL R-LOW			×
AA05	5	PANEL G-LOW			×
AA06	6	PANEL B-LOW			×
AA07	7	ABL LEVEL			×
AA08	8	X-SUS-B			×
AA09	9	X-SUS-G			×
AA00	10	Y-SUS-B			×
AA46	11	Y-SUS-G			×
AA47	12	V-SUS			×
AA4D	BS1	V-OFFSET			×
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	»	Adjustment value of the parameter selecting goes up.			
AA95	«	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	OFFSET		

### ●Operating specification

- Start from PANEL R-HIGH (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- When there is not the item which is applicable to an input signal mode, display the adjustment value to "\_\_\_\_\_", and turn the item display color into gray.

④ **REFERENCE — SLOT (At Connected SLOT ST1)** • This mode is effective for SLOT ST1 only in connection

1	1	5	10	15	20	25	30	32
1	REF-SLOT			#1-S1-IN4-02-2*NT				
5								
10								
15	Y-DELAY			:	*	*	*	
16								

Display color : White  
 Half tone : Blue (second row / 15th row for each 1 to 32th columns)

● **Basic Operation**

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	Y-DELAY	Call the adjustment value and display it.		×
AA02	2	Y-OUT LEVEL			×
AA03	3	CD TINT			×
AA04	4	CDR OFFSET			×
AA05	5	CDB OFFSET			×
AA06	6	R-Y LEVEL			×
AA07	7	B-Y LEVEL			×
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	»	Adjustment value of the parameter selecting goes up.			
AA95	«	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70	AUDIO	Shift to various adjustment / setting screen.	INFORMATION		
AA4A	DISPLAY CALL				
AA1D	SURROUND MODE		RANGE CHECK		
AA59	AV SELECT		REFERENCE		
AA43	AV MEMORY		OFFSET		
AA1E	MPX		VIDEO OPTION		
AAD3-AF3C	SCREEN SIZE		INITIALIZE		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM				
AA49	MUTING	Shift to next adjustment / setting screen.	OFFSET		

● **Operating specification**

- Start from Y-DELAY (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- When there is not the item which is applicable to an input signal mode, display the adjustment value to "\_\_\_\_\_", and turn the item display color into gray.



## ① OFFSET — RGB1

1	5	10	15	20	25	30	32
1	OFS	RGB1	#1	S1	IN4	02	2*NT
5							
10							
15	MAT	CONT	:	*	*	*	(***)
16							

Display color : White  
 Half tone : Blue (second row / 15th row for each 1 to 32th columns)

## ●Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	MAT CONT	Call the adjustment value and display it.		×
AA02	2	MAT BRIGHT			×
AA03	3	MAT COLOR			×
AA04	4	MAT TINT			×
AA05	5	AD MAIN CONT			×
AA06	6	AD R HIGH			×
AA07	7	AD G HIGH			×
AA08	8	AD B HIGH			×
AA09	9	AD R LOW			×
AA00	10	AD G LOW			×
AA46	11	AD B LOW			×
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	»	Adjustment value of the parameter selecting goes up.			
AA95	«	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70	AUDIO	Shift to various adjustment / setting screen.	INFORMATION		
AA4A	DISPLAY CALL		RANGE CHECK		
AA1D	SURROUND MODE		REFERENCE		
AA59	AV SELECT		OFFSET		
AA43	AV MEMORY		VIDEO OPTION		
AA1E	MPX		INITIALIZE		
AAD3-AF3C	SCREEN SIZE				
AAD3-AF36	FULL AUTO ZOOM	Shift to next adjustment / setting screen.			
AAD3-AF22	P.ZOOM		VIDEO OPTION		
AA49	MUTING				

## ●Operating specification

- Start from MAT CONT (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- When there is not the item which is applicable to an input signal mode, display the adjustment value to "——— (———)", and turn the item display color into gray.

## ② OFFSET — RGB2

Display color : White  
Half tone : Blue (second row / 15th row for each 1 to 32th columns)

Perform the adjustment of each parameter.

- **Operating specification**

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### ③ OFFSET — DIGITAL

	1	5	10	15	20	25	30	32	
1	O	F	S	-	D	I	G	#	1-S1-I N4-02-2 *NT
5									
10									
15	P	A	N	E	L	R	-	H	I
16							:	*	* * (* * *)

Display color : White  
Half tone : Blue (second row / 15th row for each 1 to 32th columns)

### ● Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	PANEL R-HIGH	Call the adjustment value and display it.		×
AA02	2	PANEL G-HIGH			×
AA03	3	PANEL B-HIGH			×
AA04	4	PANEL R-LOW			×
AA05	5	PANEL G-LOW			×
AA06	6	PANEL B-LOW			×
AA07	7	ABL LEVEL			×
AA08	8	X-SUS-B	-	Selection is possible, and setting is impossible	×
AA09	9	X-SUS-G			×
AA00	10	Y-SUS-B			×
AA46	11	Y-SUS-G			×
AA47	12	V-SUS			×
AA4D	BS1	V-OFFSET			×
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	≫	Adjustment value of the parameter selecting goes up.			
AA95	≪	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING		Shift to next adjustment / setting screen.	VIDEO OPTION	

- Operating specification

- Start from PANEL R—HIGH (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- When there is not the item which is applicable to an input signal mode, display the adjustment value to "\_\_\_\_ (\_\_\_\_)", and turn the item display color into gray.
- Because there is not the item which is applicable to an OFFSET item as for X—SUS—B, X—SUS—G, Y—SUS—B, Y—SUS—G, V—SUS and V—OFFSET, selection is impossible. Always turn the OSD display color into gray, and display the adjustment value to "\_\_\_\_ (\_\_\_\_)".

## ④ OFFSET — SLOT (At Connected SLOT ST1)

• This mode is effective for SLOT ST1 only in connection

	1	5	10	15	20	25	30	32			
1	OFS-SLOT			#1-S1-IN4-02-2*NT							
5											
10											
15	Y-DELAY			:***(***)							
16											

Display color : White

Half tone : Blue (second row / 15th row for each 1 to 32th columns)

### ●Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	Y-DELAY	Call the adjustment value and display it.		×
AA02	2	Y-OUT LEVEL			×
AA03	3	CD TINT			×
AA04	4	CDR OFFSET			×
AA05	5	CDB OFFSET			×
AA06	6	R-Y LEVEL			×
AA07	7	B-Y LEVEL			×
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	»	Adjustment value of the parameter selecting goes up.			
AA95	«	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	VIDEO OPTION		

### ●Operating specification

- Start from Y-DELAY (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- When there is not the item which is applicable to an input signal mode, display the adjustment value to "——— (———)", and turn the item display color into gray.

## 6. VIDEO OPTION

	1	5	10	15	20	25	30	32	
1	VIDEO		OPT		#1-S1-IN4-02-2*NT				
5									
10									
15	SIDE MASK		LEV						
16									

Display color : White  
Half tone : Blue (second row / 15th row for  
each 1 to 32th columns)

- **Basic Operation**

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	SIDE MASK LEV	Select the adjustment item	Shift to adjustment screen of SIDE MASK LEVEL at SET (AA8A).	○
AA02	2	C MODE2		Shift to adjustment screen of COLOR MODE2 at SET (AA8A).	○
AA03	3	C TEMP LOW		Shift to adjustment screen of COLOR TEMP LOW at SET (AA8A).	○
AA04	4	C TEMP MID LOW		Shift to adjustment screen of COLOR TEMP MID LOW at SET (AA8A).	○
AA05	5	C TEMP MID HIGH		Shift to adjustment screen of COLOR TEMP MID HIGH at SET (AA8A).	○
AA06	6	C TEMP HIGH		Shift to adjustment screen of COLOR TEMP HIGH at +SET (AA8A).	○
AA07	7				
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	»				
AA95	«				
AA8A	SET	Select the item and shift to adjustment screen.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	INITIALIZE		



# PDP-433CMX, PDP-433MXE

## •Operating specification

- Start from SIDE MASK LEVEL (Key 1) when shifted to this setting screen.  
However, the movement original item to be selected when shifted from the lower layer.
- When each key was pressed, follow the required operation.
- When entered the service factory mode, COLOR MODE works by integrator setting.  
However in the COLOR MODE2 adjustment, Work with COLOR MODE2 without relation in COLOR MODE setting of the integrator menu.
- COLOR TEMP Setting in the COLOR TEMP Adjustment  
When entered the service factory mode without a relation in user setting, COLOR TEMP becomes "MIDDLE".  
In the COLOR TEMP adjustment, switch the operation to setting of selected COLOR TEMP.

## ① SIDE MASK LEV. Adjustment

	1			5					10					15					20					25				30		32	
1		V	O	P	-	S			M	A	S	K			#	1	-	S	1	-	I	N	4	-	0	2	-	2	*	N	T
5																															
10																															
15		R		S	I	D	E		M	A	S	K		L	E	V			:	*	*	*	*								
16																															

Display color : White  
 Half tone : Blue (second row / 15th row for  
 each 1 to 32th columns)

## ●Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	R SIDE MASK LEV	Call the adjustment value and display it.		×
AA02	2	G SIDE MASK LEV			×
AA03	3	B SIDE MASK LEV			×
AA04	4				
AA05	5				
AA06	6				
AA07	7				
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	»	Adjustment value of the parameter selecting goes up.			
AA95	«	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	INITIALIZE		

## ●Operating specification

- Start from R SIDE MASK LEVEL (key 1) when shifted to this setting screen.
- When a key is pressed, follow the required operation after performing the last memory of current adjustment value.

# PDP-433CMX, PDP-433MXE

## ② COLOR MODE2 Adjustment

	1	5	10	15	20	25	30	32				
1	VOP-C MODE2 #1-S1-I N4-02-2*NT											
5												
10												
15	CONTRAST :***											
16												

COLOR MODE indication of second row/31th columns displays the default.  
(It is not controlled with the COLOR MODE in adjustment.)

Display color : White  
Half tone : Blue (second row / 15th row for each 1 to 32th columns)

### ●Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	CONTRAST	Call the adjustment value and display it.		×
AA02	2	BRIGHT			×
AA03	3	COLOR			×
AA04	4	TINT			×
AA05	5	R HIGH			×
AA06	6	G HIGH			×
AA07	7	B HIGH			×
AA08	8	R LOW			×
AA09	9	G LOW			
AA00	10	B LOW			
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	≫	Adjustment value of the parameter selecting goes up.			
AA95	≪	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	INITIALIZE		

### ●Operating specification

- Start from CONTRAST (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- It becomes COLOR MODE2 during COLOR MODE adjustment. However, do not perform the last memory of setting.  
(Perform last memory of the adjustment value.)

## ③ COLOR TEMP Adjustment

	1	5	10	15	20	25	30	32																								
1	V O P - C T M I D H # 1 - S 1 - I N 4 - 0 2 - 2 * N T																															
5																																
10																																
15	C O N T R A S T : * * *																															
16																																

Display color : White  
 Half tone : Blue (second row / 15th row for each 1 to 32th columns)

## ●Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	CONTRAST	Call the adjustment value and display it.		×
AA02	2	BRIGHT			×
AA03	3	COLOR			×
AA04	4	TINT			×
AA05	5	R HIGH			×
AA06	6	G HIGH			×
AA07	7	B HIGH			×
AA08	8	R LOW			×
AA09	9	G LOW			×
AA00	10	B LOW			×
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	»	Adjustment value of the parameter selecting goes up.			
AA95	«	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	INITIALIZE		

## ●Operating specification

- Start from CONTRAST (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- Works by the selected COLOR TEMP setting during COLOR TEMP adjustment. However, do not perform the last memory of setting and maintain the "MIDDLE". (Perform last memory of the adjustment value.)

## 7. INITIALIZE

	1	5	10	15	20	25	30	32																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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Display color : White  
 Half tone : Blue (second row / 15th row for each 1 to 32th columns)

### •Basic Operation

- Perform the modification and confirmation of various setting.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	COLOR DET	...→EURO→SA→ALL→...		×
AA02	2	EED CHECK	EEPROM writing check		×
AA03	3	ACL SW	ON ↔ OFF		×
AA04	4	INTEGRATOR MODE	...→LOCK→UNLOCK→...		×
AA05	5	P&P WRITE ENA	For Plug & Play EEPROM writing		×
AA06	6	HOURLMETER SET	Set the current hourmeter	Shift to setting screen at SET (AA8A)	○
AA07	7	PULSEMETER SET	Set the pulse hourmeter	Shift to setting screen at SET (AA8A)	○
AA08	8	FINAL SET UP		Execute at SET (AA8A)	×
AA09	9	VIDEO STANDARD	...→0→1→2→3→4→5→6→7→8→9→A...		×
AA00	10	PC STANDARD	...→0→1→2→3→4→5→6→7→8→9→A...		×
AA46	11	VIDEO MODE1	...→0→1→2→3→4→5→6→7→8→9→A...		×
AA47	12	PC MODE1	...→0→1→2→3→4→5→6→7→8→9→A...		×
AA4D	BS1	EED DATA READ		Shift to setting screen at SET (AA8A)	○
AA4E	BS3	MASK1		Shift to setting screen at SET (AA8A)	○
AA4F	BS5	MASK2		Shift to setting screen at SET (AA8A)	○
AA50	BS7	MEMO		Shift to writing screen at SET (AA8A)	○
AA51	BS9	SERVICE PARTS		Execute at SET (AA8A)	×
AA52	BS11	PICTURE DEFAULT		Execute at SET (AA8A)	×
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	»	Select the function			
AA95	«	Select the function			
AA8A	SET	Select the item and shift to lower layer, or store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	INFORMATION		

### ●Operating specification

- Start from COLOR DET (Key 1) when shifted to this setting screen.  
However, the movement original item to be selected when shifted from the lower layer.
- When each key was pressed, follow the required operation.
- Perform the last memory of COLOR DET., ACL SW, INTE. MODE, MEMO, VIDEO STANDARD, PC STANDARD, VIDEO MODE1, PC MODE1, HOURMETER SET, PULSEMETER SET, FINAL SET UP, MASK1, MASK2 and PICTURE DEFAULT.

### ●Function description

1. COLOR DET. : Set the color detection system.

→ EURO → SA → ALL →

2. EEP CHECK: Check the EEPROM writing

Display lower two places with the hexadecimal number of the result that added data to subaddress 1760-177C (PDC XGA/SHARP data) of EEPROM.

3. ACL SW: Set the ACL.

4. INTEGRATOR MODE: Set the integrator protection.

5. P&P WRITE ENA: Set the writing permission of the EEPROM for Plug & Play.

6. HOURMETER SET: Display and set the hourmeter.

	1	5	10	15	20	25	30	32
1	I	N	I	T			# 1 - S 1 - I N 4 - 0 2 - 2 * N T	
5								
10								
15								
16								

Can change three places of upper rank of SETDATA.

▲▼ : Select numeric value.

«» : Can select three places of upper rank.

SET : Shift to the setting modification  
and confirmation screen.

	1	5	10	15	20	25	30	32
1	I	N	I	T			# 1 - S 1 - I N 4 - 0 2 - 2 * N T	
5								
10								
15								
16								

«» : YES/NO selection

SET : Store the SET DATA at YES selection  
and shift to INIT screen.

Hold the NOW DATA at NO selection  
and shift to INIT screen.

7. PULSEMETER SET: Display and set the pulse meter.

	1	5	10	15	20	25	30	32
1	I	N	I	T			# 1 - S 1 - I N 4 - 0 2 - 2 * N T	
5								
10								
15								
16								

Can change three places of upper rank of SETDATA.

▲▼ : Select numeric value.

«» : Can select three places of upper rank.

SET : Shift to the setting modification  
and confirmation screen.

# PDP-433CMX, PDP-433MXE

1	5	10	15	20	25	30	32
1	I	N	I	T			
				#	1	-	S
					1	-	I
					N	4	-
					0	2	-
					2	*	N
							T
5							
10							
15							
16							

<<>> : YES/NO selection  
 SET : Store the SET DATA at YES selection  
 and shift to INIT screen.  
 Hold the NOW DATA at NO selection  
 and shift to INIT screen.

- FINAL SET UP: Setting to the factory shipping state.  
(Refer to the Final Setup Details.)
- VIDEO STANDARD: Set the peak occurrences of STANDARD (USER MENU / POWER CONTROL) in the video system signal.  
(Set the following table 1.) Note: Please do not perform the change of setting in the service.
- PC STANDARD: Set the peak occurrences of STANDARD (USER MENU / POWER CONTROL) in the PC system signal.  
(Set the following table 2.) Note: Please do not perform the change of setting in the service.
- VIDEO MODE1: Set the peak occurrences of MODE1 (USER MENU / POWER CONTROL) in the video system signal.  
(Set the following table 3.) Note: Please do not perform the change of setting in the service.
- PC MODE1: Set the peak occurrences of MODE1 (USER MENU / POWER CONTROL) in the PC system signal.  
(Set the following table 4.) Note: Please do not perform the change of setting in the service.

		Current Input Signal	
		VIDEO	PC
POWER CONTROL setting	STANDARD mode	Table1	Table2
	MODE1	Table3	Table4
	MODE2	PL6 (fixed)	

- EEP DATA READ: Display the each address data of EEPROM.

1	5	10	15	20	25	30	32
1	I	N	I	T			
				#	1	-	S
					1	-	I
					N	4	-
					0	2	-
					2	*	N
							T
5							
10							
15							
16							

<<>> : Select the address (four places) place.  
 ▲▼ : Select numeric value.  
 SET : Shift to upper layer.  
 Update display data (hex) every address modification.  
  
 Display color : White (Selected address is yellow)  
 Half tone : Blue (second row / 15th row for  
 each 1 to 32th columns)

- MASK1: Select the full mask.  
Note: Mask 1/2 are commonness and perform one item last memory.
- MASK2: Select the mask pattern.  
Note: Mask 1/2 are commonness and perform one item last memory.

## Caution: (item 14, 15 commonness)

- When key operation is done and performs OSD display, turns OFF FULL MASK for two seconds and display OSD. (common to in all modes)
- In FULL MASK selection (in MASK selection menu), Select the mask and turn off OSD two seconds later of no operation, and MASK screen displays.
- Perform MASK determination (press "SET"), and FULL MASK screen display starts.
- Release of the mask is possible only with "M00" with the RS-232C factory adjustment mode or "MASK OFF" of the service factory menu.  
(Release is impossible with "FULL MASK OFF" of the integrator menu and "FMN" of the RS-232C command.)

16. MEMO: Display and edit the memo data.

1	1	5	10	15	20	25	30	32
1	I	N	I	T				
					#	1	-	S
						1	-	I
						N	4	-
						0	2	-
						2	*	N
								T
5	M	E	M	O				
10								
15								
16								

<MEMO/SELECT>

- Select MEMO to edit with ▲▼ keys.
- Shift to the <MEMO/EDIT> screen with the SET key.
- When selects BACK and presses the SET key, shift to the upper layer.

1	1	5	10	15	20	25	30	32
1								
5								
10								
15								
16								

<MEMO/EDIT>

- Editing technique refers to the step of INPUT label of the user menu.
- Default is "- - - - -" display.
- When "RESET" was pressed, display returns to the default display setting.

17. SERVICE PARTS : Rewrite a PD number of the module microcomputer to the parts recognition number for service.

Refer to "7.1.3 AUTOMATIC BACKUP OF DIGITAL VIDEO ASSY DATA".

For service recognition number: Modify the first column of the PD number to F

**Caution:** Only the EEPROM for the module microcomputer to modify the service recognition number.

A service identification number of module microcomputer data area in EEPROM for main microcomputer does not rewrite it.  
Examples: F691 (an original PD number is 5691).

18. PICTURE DEFAULT

- The data which adjusted in the service factory mode reflect as default value of PICTURE, WHITE BAL and SIDE MASK LEVEL of the integrator menu.
- The value that adjusted in the service factory mode is not reflected to all video output data except the service factory mode so long as does not execute "PICTURE DEFAULT" or "FINAL SETUP".
- Execute "PICTURE DEFAULT" after the adjustment for the value that adjusted in the service factory mode is reflected to video output data.

**Note:** When executed "PICTURE DEFAULT"

- ① All the PICTURE items of the user menu are reset.
- ② PICTURE, WHT BAL and SIDE MASK LEVEL of the integrator menu become default value all in base with the current factory adjustment value.



# PDP-433CMX, PDP-433MXE

## ● FINAL SETUP Details

Items		Initial Setting	Remarks
Key Remote control input			
Power supply (STANDBY/ON)			NO CARE
Input function		INPUT1	
Screen size	VIDEO	WIDE	(In the video signal input) Every each input function
	PC	① DOT BY DOT	(In the PC signal input) Every each input function and signal mode Priority sequence is ① → ② → ③
		② 4 : 3 (included TYPE)	
		③ FULL (included TYPE)	
Vertical position adjustment (V scroll)		0	Every each input function (at VIDEO)
KEY LOCK		UNLOCK	All input functions are common
VOLUME		0	
User menu setting item			
PICTURE		Default value of all adjustment	Every each input function and signal mode
SCREEN		Default value of all adjustment	Every each input function and signal mode (at PC)
INPUT LABEL		□INPUT*□	(*: 1 to 5). Every each input function
AUTO POWER OFF		OFF	Every each input function
POWER MANAGEMENT		OFF	INPUT1 (at PC) /5
COLOR TEMP		MIDDLE	Every each input function (at VIDEO)
DIGITAL NR		LOW	
HIGH CONTRAST		OFF	
PURECINEMA		OFF	Every each input function (at 525i (NTSC))
COLOR SYSTEM		AUTO	Every each INPUT3/4
CLAMP POSITION		AUTO	Every each INPUT1/2
3D Y/C MODE		MOTION	INPUT 4
SETTING		VGA (at mode03, 31, E1)	Every INPUT 1/2
		XGA (at mode61, 71, 63, 73)	
VIDEO SIGNAL		RGB	
POWER CONTROL		STANDARD	(VIDEO/PC) All input functions are common
AUTO FUNCTION		OFF	All input functions are common
AUDIO OUT		FIXED	
Integrator menu setting item			
PICTURE		Default value of all adjustment items	Every each input function and signal mode
WHITE BALANCE		Default value of all adjustment items	
SCREEN		Default value of all adjustment items	
2×2 MODE		OFF/Upper left	Every each input function
BRT. ENHANCE	VIDEO	OFF	
	PC	OFF	Every each function that the PC input is possible
HDTV MODE		1035i	All input functions are common
VIDEO INPUT		COMPONENT1	750p/1125i/1125p
		COMPONENT2	525i/525p/625i/625p
SUB VOLUME		60	Every input function
OSD		ON	Set is common
BAUD RATE		4800BPS	
TIMER		OFF/1/0.0/WHT	(Setting/Timer time/Mask time/mask color) All input functions are common

Items		Initial Setting	Remarks
FULL MASK		OFF	Set is common
SIDE MASK	R LEVEL	Default value	
	G LEVEL	Default value	
	B LEVEL	Default value	
MASK CONTROL		ON	Set is common
ORBITER MODE		OFF	
INVERSE MODE		OFF	
COLOR MODE		MODE1	
MIRROR MODE		OFF	Set is common
FAN CONTROL		AUTO	
MONITOR NAME		□□□PLASMA□□□	
ID NO SET		--	
SLOT INPUT		VIDEO (RGB)	
<b>Factory Setting Item</b>			
INTE MODE		UNLOCK	Set is common
MASK1/2 setting		OFF	
ACL SW		ON	
COLOR DET			NO CARE
<b>RS-232C Setting Item</b>			
VIDEO MUTE		OFF	Set is common
LED		ON	
100% display		OFF	

# PDP-433CMX, PDP-433MXE

## ① MASK1

	1	5	10	15	20	25	30	32																								
1	INIT-MASK1#1-S1-IN4-02-2*NT																															
5																																
10																																
15	MASK:OFF(60Hz)																															
16																																

Display color : White  
 Half tone : Blue (second row / 15th row for each 1 to 32th columns)

## ●Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	OFF		OFF	×
AA02	2	MASK51		White	×
AA03	3	MASK52		Cyan 274	×
AA04	4	MASK53		Mazenta 1023	×
AA05	5	MASK54		Flesh color	×
AA06	6	MASK55		Cyan 1023	×
AA07	7	MASK56		Light purple	×
AA08	8	MASK57		Sky blue	×
AA09	9	MASK58		Red	×
AA00	10	MASK59		Green	×
OAA46	11	MASK60		Blue	×
AA47	12	MASK61		Black	×
AA4D	BS1	MASK62		Red 779	×
AA4E	BS3	MASK63		Cyan 218	×
AA4F	BS5	MASK64		Cyan 444	×
AA50	BS7	MASK65		Flesh color 43	×
AA51	BS9	MASK66		Red 620	×
AA52	BS11				
AA53	BS13				
AA54	BS15				
		MASK67		FULLMASK (Mazenta 98)	×
		MASK68		FULLMASK (Sky blue1_43)	×
		MASK69		FULLMASK (Sky blue2_43)	×
		MASK70		FULLMASK (Light purple43)	×
		MASK71		FULLMASK (Yellow)	×
		MASK72		FULLMASK (Blue916)	×
		MASK73		FULLMASK (Reservation)	×
		MASK74		FULLMASK (Reservation)	×
AA96	▲	Select the upper item			
AA97	▼	Select the lower item			
AA94	»	Select free-running frequency	••→50Hz→60Hz→70Hz→••	Default is 60 Hz	
AA95	«	Select free-running frequency	••→50Hz→60Hz→70Hz→••	Default is 60 Hz	
AA8A	SET	Store the selected item and shift to upper layer			
AAD3-AF70	AUDIO	Shift to various adjustment / setting screen.	INFORMATION		
AA4A	DISPLAY CALL		RANGE CHECK		
AA1D	SURROUND MODE		REFERENCE		
AA59	AV SELECT		OFFSET		
AA43	AV MEMORY		VIDEO OPTION		
AA1E	MPX		INITIALIZE		
AAD3-AF3C	SCREEN SIZE				
AAD3-AF36	FULL AUTO ZOOM				
AAD3-AF22	P.ZOOM				
AA49	MUTING	Shift to next adjustment / setting screen.	INFORMATION		

## ●Operating specification

- Start from MASK OFF (Key1) when shifted to this setting screen. However, set MASK position is a default when sets an either mask already.
- When entered this mode by the state that either MASK set of MASK2, setting of MASK2 is off, and MASK1 starts from MASK OFF (Key1).
- MASK67-MASK74 are not assigned to the direct key, it is selectable only with up and down ("▲", "▼")keys.
- When a key was pressed, follow the required operation after performed the last memory of the current adjustment value.

**Caution:** In the MASK display, do not display the OSD.

When other operations were selected, perform OSD display after MASK OFF for two seconds.  
 Then return to selected FULL MASK display.

## ② MASK2

	1			5				10					15				20				25				30		32			
1		I	N	I	T	-	M	A	S	K	2			#	1	-	S	1	-	I	N	4	-	0	2	-	2	*	N	T
5																														
10																														
15																														
16																														

Display color : White  
 Half tone : Blue (second row / 15th row for each 1 to 32th columns)

## ● Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	MASK OFF		OFF	×
AA02	2	MASK 01		Pattern 1 (Ramp)	×
AA03	3	MASK 02		Pattern 2 (Color-bar)	×
AA04	4	MASK 03		Pattern 3 (Slanting line)	×
AA05	5	MASK 04		Pattern 4 (For W/B Lo-Light adjustment 1/5Window (14%, 56%))	×
AA06	6	MASK 05		Pattern 5 (For W/B Lo-Light adjustment 1/5Window (Pred, Skin))	×
AA07	7	MASK 06		Pattern 6 (For W/B Peak adjustment 1/5Window (100%))	×
AA08	8	MASK 07		Pattern 7 (Peak signal : For peak measurement and adjustment 1/5Window (100%))	×
AA09	9	MASK 08		Pattern 8 (Reservation)	×
AA00	10	MASK 09		Pattern 9 (For scan IC protection test Window-A)	×
AA46	11	MASK 10		Pattern 10 (For scan IC protection test Window-B)	×
AA47	12	MASK 11		Pattern 11 (Reservation)	×
AA4D	BS1	MASK 12		Pattern 12 (Reservation)	×
AA4E	BS3	MASK 13		Pattern 13 (Reservation)	×
AA4F	BS5	MASK 14		Pattern 14 (Reservation)	×
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select the upper item			
AA97	▼	Select the lower item			
AA94	»	Select free-running frequency	••→50Hz→60Hz→70Hz→••	Default is 60 Hz	
AA95	«	Select free-running frequency	••→50Hz→60Hz→70Hz→••	Default is 60 Hz	
AA8A	SET	Store the selected item and shift to upper layer			
AAD3-AF70	AUDIO	Shift to various adjustment / setting screen.	INFORMATION		
AA4A	DISPLAY CALL		RANGE CHECK		
AA1D	SURROUND MODE		REFERENCE		
AA59	AV SELECT		OFFSET		
AA43	AV MEMORY		VIDEO OPTION		
AA1E	MPX		INITIALIZE		
AAD3-AF3C	SCREEN SIZE				
AAD3-AF36	FULL AUTO ZOOM	Shift to next adjustment / setting screen.	INFORMATION		
AAD3-AF22	P.ZOOM				
AA49	MUTING				

## ● Operating specification

- Start from MASK OFF (Key1) when shifted to this setting screen. However, set MASK position is a default when sets an either mask already.
- When entered this mode by the state that either MASK set of MASK1, setting of MASK1 is off, and MASK 2 starts from MASK OFF (Key1).
- MASK67-MASK74 are not assigned to the direct key, it is selectable only with up and down ("▲", "▼") keys.
- When a key was pressed, follow the required operation after performed the last memory of the current adjustment value.

**Caution:** In the MASK display, do not display the OSD.

When other operations were selected, perform OSD display after MASK OFF for two seconds.

Then return to selected MASK display.

# PDP-433CMX, PDP-433MXE

## ● Cassification 1 of Input Signal Mode (VIDEO)

SIG Mode	Signal Type	OSD display	V. Frequency fv (Hz)	H. Frequency fh (Hz)	Display Pixel Number	INPUT5 (DVI input) Correspondence
00 • 6 00 • 7 00 • 8 00 • 9	SDTV • 625i (PAL/SECAM)	4 : 3 FULL ZOOM WIDE	50	15.6	784 × 768 1024 × 768 1024 × 768 1024 × 768	× (no-correspondence)
01 • 6 01 • 7 01 • 8 01 • 9	SDTV • 625p (PAL • Progressive)	4 : 3 FULL ZOOM WIDE	50	31.2	784 × 768 1024 × 768 1024 × 768 1024 × 768	× (no-correspondence)
02 • 6 02 • 7 02 • 8 02 • 9	SDTV • 525i (NTSC/4.43NTSC)	4 : 3 FULL ZOOM WIDE	60	15.7	784 × 768 1024 × 768 1024 × 768 1024 × 768	× (no-correspondence)
03 • 6 03 • 7 03 • 8 03 • 9	SDTV • 525p (NTSC • Progressive)	4 : 3 FULL ZOOM WIDE	60	31.5	784 × 768 1024 × 768 1024 × 768 1024 × 768	× (no-correspondence)
11 • 7	HDTV • 1125i (1080 number of effective scanning lines)	FULL	50	28.1	1024 × 768	× (no-correspondence)
12 • 7	HDTV • 1125i (1080 number of effective scanning lines)	FULL	60	33.8	1024 × 768	× (no-correspondence)
13 • 7	HDTV • 1125i (1035 number of effective scanning lines)	FULL	60	33.8	1024 × 768	× (no-correspondence)
14 • 7	HDTV • 750p (720 number of effective scanning lines)	FULL	60	45.0	1024 × 768	× (no-correspondence)
15 • 7	HDTV • 1125p (1080 number of effective scanning lines)	FULL	60	67.5	1024 × 768	× (no-correspondence)

## ● Classification 2 of Input Signal Mode (PC)

SIG Mode	Signal Type	OSD Display	V. Frequency v (Hz)	H. Frequency h (Hz)	Display Pixel Number	INPUT5 (DVI input) Correspondence
20 • 2	640 × 400	FULL	56	24.8	1024 × 768	× (non-correspondence)
23 • 2	640 × 400	FULL	79	31.5	1024 × 768	× (non-correspondence)
31 • 0 31 • 1 31 • 2	640 × 480	DOT BY DOT 4 : 3 FULL	60	31.5	640 × 480 768 × 768 1024 × 768	○ (correspondence)
32 • 0 32 • 1 32 • 2	640 × 480	DOT BY DOT 4 : 3 FULL	67	35.0	640 × 480 768 × 768 1024 × 768	× (non-correspondence)
34 • 0 34 • 1 34 • 2	640 × 480	DOT BY DOT 4 : 3 FULL	73	37.9	640 × 480 768 × 768 1024 × 768	× (non-correspondence)
35 • 0 35 • 1 35 • 2	640 × 480	DOT BY DOT 4 : 3 FULL	75	37.5	640 × 480 768 × 768 1024 × 768	× (non-correspondence)
36 • 0 36 • 1 36 • 2	640 × 480	DOT BY DOT 4 : 3 FULL	85	43.3	640 × 480 768 × 768 1024 × 768	× (non-correspondence)
40 • 4 40 • 1 40 • 2	800 × 600	DOT BY DOT 4 : 3 (TYPE) FULL	56	35.2	800 × 600 768 × 768 1024 × 768	○ (correspondence)
41 • 0 41 • 1 41 • 2	800 × 600	DOT BY DOT 4 : 3 (TYPE) FULL	60	37.9	800 × 600 768 × 768 1024 × 768	○ (correspondence)
44 • 0 44 • 1 44 • 2	800 × 600	DOT BY DOT 4 : 3 (TYPE) FULL	72	48.1	800 × 600 768 × 768 1024 × 768	× (non-correspondence)
45 • 0 45 • 1 45 • 2	800 × 600	DOT BY DOT 4 : 3 (TYPE) FULL	75	46.9	800 × 600 768 × 768 1024 × 768	× (non-correspondence)
46 • 0 46 • 1 46 • 2	800 × 600	DOT BY DOT 4 : 3 (TYPE) FULL	85	53.7	800 × 600 768 × 768 1024 × 768	× (non-correspondence)
55 • 0 55 • 1 55 • 2	832 × 624	DOT BY DOT 4 : 3 (TYPE) FULL	75	49.7	832 × 624 768 × 768 1024 × 768	× (non-correspondence)
61 • 1 61 • 2	1024 × 768	4 : 3 (TYPE) DOT BY DOT	60	48.4	768 × 768 1024 × 768	○ (correspondence)
63 • 1 63 • 2	1024 × 768	4 : 3 (TYPE) DOT BY DOT	70	56.5	768 × 768 1024 × 768	× (non-correspondence)
65 • 1 65 • 2	1024 × 768	4 : 3 (TYPE) DOT BY DOT	75	60.0	768 × 768 1024 × 768	× (non-correspondence)
66 • 1 66 • 2	1024 × 768	4 : 3 (TYPE) DOT BY DOT	85	68.7	768 × 768 1024 × 768	× (non-correspondence)
70 • 2	1280 × 768	FULL (TYPE)	56	45.1	1024 × 768	○ (correspondence)
71 • 2	1280 × 768	FULL (TYPE)	60	48.1	1024 × 768	○ (correspondence)
73 • 2	1280 × 768	FULL (TYPE)	70	56.1	1024 × 768	× (non-correspondence)

# PDP-433CMX, PDP-433MXE

SIG Mode	Signal Type	OSD Display	V. Frequency v (Hz)	H. Frequency h (Hz)	Display Pixel Number	INPUT5 (DVI input) Correspondence
81 • 1 81 • 2	1152 × 864	4 : 3 (TYPE) FULL (TYPE)	60	53.7	768 × 768 1024 × 768	○ (correspondence)
84 • 1 84 • 2	1152 × 864	4 : 3 (TYPE) FULL (TYPE)	72	64.9	768 × 768 1024 × 768	× (non-correspondence)
85 • 1 85 • 2	1152 × 864	4 : 3 (TYPE) FULL (TYPE)	75	67.5	768 × 768 1024 × 768	× (non-correspondence)
95 • 1 95 • 2	1152 × 870	4 : 3 (TYPE) FULL (TYPE)	75	68.7	762 × 768 1024 × 768	× (non-correspondence)
A2 • 1 A2 • 2	1152 × 900	4 : 3 (TYPE) FULL (TYPE)	66	61.8	738 × 768 1024 × 768	× (non-correspondence)
A5 • 1 A5 • 2	1152 × 900	4 : 3 (TYPE) FULL (TYPE)	76	71.7	738 × 768 1024 × 768	× (non-correspondence)
B1 • 1 B1 • 2	1280 × 960	4 : 3 (TYPE) FULL (TYPE)	60	60.0	768 × 768 1024 × 768	○ (correspondence)
C1 • 1 C1 • 2	1280 × 1024	4 : 3 (TYPE) FULL (TYPE)	60	64.0	720 × 768 1024 × 768	○ (correspondence)
C5 • 1 C5 • 2	1280 × 1024	4 : 3 (TYPE) FULL (TYPE)	75	80.0	720 × 768 1024 × 768	× (non-correspondence)
C6 • 1 C6 • 2	1280 × 1024	4 : 3 (TYPE) FULL (TYPE)	85	91.1	720 × 768 1024 × 768	× (non-correspondence)
D1 • 1 D1 • 2	1600 × 1200	4 : 3 (TYPE) FULL (TYPE)	60	75.0	768 × 768 1024 × 768	× (non-correspondence)
D2 • 1 D2 • 2	1600 × 1200	4 : 3 (TYPE) FULL (TYPE)	65	81.3	768 × 768 1024 × 768	× (non-correspondence)
D3 • 1 D3 • 2	1600 × 1200	4 : 3 (TYPE) FULL (TYPE)	70	87.5	768 × 768 1024 × 768	× (non-correspondence)
D5 • 1 D5 • 2	1600 × 1200	4 : 3 (TYPE) FULL (TYPE)	75	93.8	768 × 768 1024 × 768	× (non-correspondence)
D6 • 1 D6 • 2	1600 × 1200	4 : 3 (TYPE) FULL (TYPE)	85	106.3	768 × 768 1024 × 768	× (non-correspondence)
E1 • 1 E1 • 2	852 × 480	DOT BY DOT FULL	60	31.7	852 × 768 1024 × 768	○ (correspondence)

## 6.2 ADJUSTMENT REQUIRED WHEN THE SET IS REPAIRED OR REPLACED

### ■ RGB Assy

#### ● When repaired

1. Adjustment is impossible when replaced the Matrix IC or AD/PLL/AMP IC.
2. Adjustment is unnecessary in case of others.

#### ● When replaced

Color balance adjustment

### ■ SW POWER SUPPLY Module

#### ● When replaced

No adjustment required.

### ■ DIGITAL VIDEO Assy

#### ● When repaired

No adjustment required.

#### ● When replaced

1. Adjustment is unnecessary when replaced only the DIGITAL VIDEO Assy.
2. When replaced it with RGB Assy simultaneously, remove IC1204 (24LC04(1) SN-TBB) from the former PC Board to replace, and install it to the new PC Board.
3. When use new Assy which replaces it and recovered as service parts once again, replace IC1204 with new IC.

### ■ Y DRIVE Assy

#### ● When repaired

1. VOFS/VH/IC5V voltage adjustment
2. Timing adjustment of pulse module

#### ● When replaced

1. Panel white balance adjustment

### ■ X DRIVE Assy

#### ● When repaired

1. VRN voltage adjustment
2. Timing adjustment of pulse module

#### ● When replaced

1. Panel white balance adjustment

### ■ Video Card (PDA-5002)

For Adjustment, Refer to the service manual ARP3093 for PDA-5002

#### ● When repaired

1. Y LEVEL adjustment
2. Color difference and TINT adjustment

#### ● When replaced

No adjustment required.

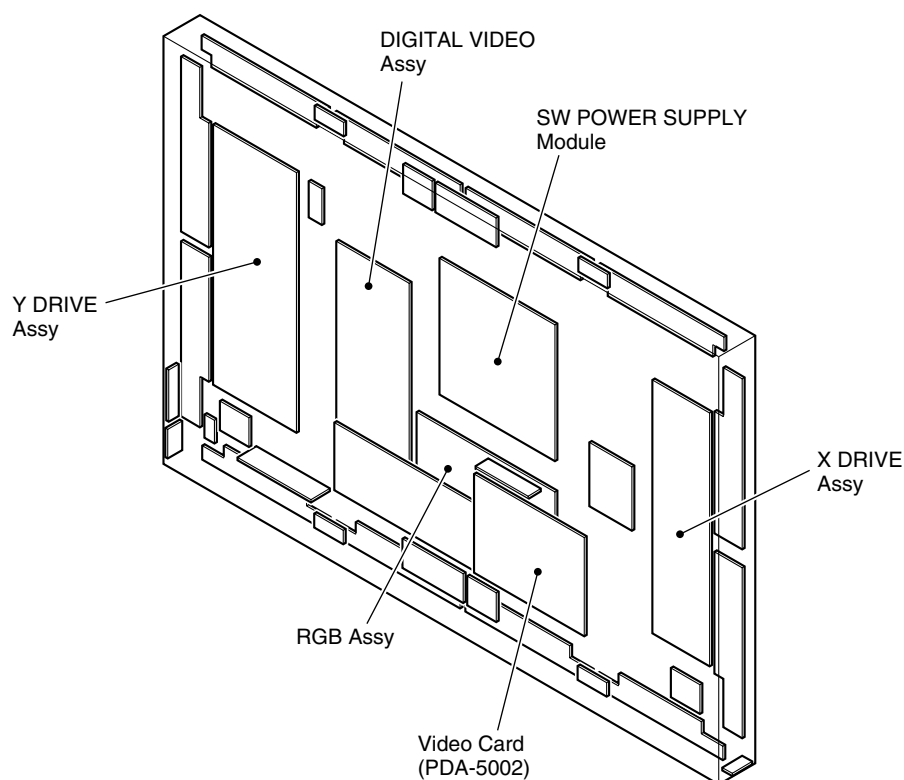


Fig. 1 PC Board Location (rear side view)



## 6.3 ADJUSTMENT

### 6.3.1 Main Unit Adjustment

#### ■ VOFS/VH/IC5V Voltage Adjustment

Input Signal	Adjusting Point	Adjusting Method																																																																																																																																				
White 100%	VR2701 (VOFS) (Y DRIVE Assy)	<p><b>VOFS (Offset voltage) adjustment</b></p> <p><b>Method 1</b></p> <p>1. Write down a adjustment value of V-OFFSET of REF-DIG mode in the factory mode.</p> <p>2. Set this adjustment value to center (128).</p> <p>3. Adjust VR2701 so that the voltage between K2701 (VOFS) and K2703 (SUS GND) becomes 45V.</p> <p>4. Return it to the value that wrote down a adjustment value of V-OFFSET in step 1.</p> <p><b>Method 2</b></p> <p>1. Read the adjustment value of V-OFFSET of REF-DIG mode in the factory mode.</p> <p>2. Adjust VR2701 so that the voltage between K2710 (VOFS) and K2703 (SUS GND) becomes following voltage <math>\pm 0.5V</math>.</p> <table><thead><tr><th>Input Command</th><th>DAC Output</th><th>Setting Voltage</th><th>Input Command</th><th>DAC Output</th><th>Setting Voltage</th></tr></thead><tbody><tr><td>VOF000</td><td>0.4</td><td>25</td><td>VOF134</td><td>2.599212598</td><td>45.94488</td></tr><tr><td>VOF006</td><td>0.4984375</td><td>25.9375</td><td>VOF141</td><td>2.71496063</td><td>47.04724</td></tr><tr><td>VOF013</td><td>0.61328125</td><td>27.03125</td><td>VOF147</td><td>2.814173228</td><td>47.99213</td></tr><tr><td>VOF019</td><td>0.71171875</td><td>27.96875</td><td>VOF153</td><td>2.913385827</td><td>48.93701</td></tr><tr><td>VOF026</td><td>0.8265625</td><td>29.0625</td><td>VOF160</td><td>3.029133858</td><td>50.03937</td></tr><tr><td>VOF032</td><td>0.925</td><td>30</td><td>VOF166</td><td>3.128346457</td><td>50.98425</td></tr><tr><td>VOF038</td><td>1.0234375</td><td>30.9375</td><td>VOF172</td><td>3.227559055</td><td>51.92913</td></tr><tr><td>VOF045</td><td>1.13828125</td><td>32.03125</td><td>VOF179</td><td>3.343307087</td><td>53.0315</td></tr><tr><td>VOF051</td><td>1.23671875</td><td>32.96875</td><td>VOF185</td><td>3.442519685</td><td>53.97638</td></tr><tr><td>VOF058</td><td>1.3515625</td><td>34.0625</td><td>VOF191</td><td>3.541732283</td><td>54.92126</td></tr><tr><td>VOF064</td><td>1.45</td><td>35</td><td>VOF198</td><td>3.657480315</td><td>56.02362</td></tr><tr><td>VOF070</td><td>1.5484375</td><td>35.9375</td><td>VOF204</td><td>3.756692913</td><td>56.9685</td></tr><tr><td>VOF077</td><td>1.66328125</td><td>37.03125</td><td>VOF211</td><td>3.872440945</td><td>58.07087</td></tr><tr><td>VOF083</td><td>1.76171875</td><td>37.96875</td><td>VOF217</td><td>3.971653543</td><td>59.01575</td></tr><tr><td>VOF090</td><td>1.8765625</td><td>39.0625</td><td>VOF223</td><td>4.070866142</td><td>59.96063</td></tr><tr><td>VOF096</td><td>1.975</td><td>40</td><td>VOF230</td><td>4.186614173</td><td>61.06299</td></tr><tr><td>VOF102</td><td>2.0734375</td><td>40.9375</td><td>VOF236</td><td>4.285826772</td><td>62.00787</td></tr><tr><td>VOF109</td><td>2.18828125</td><td>42.03125</td><td>VOF242</td><td>4.38503937</td><td>62.95276</td></tr><tr><td>VOF115</td><td>2.28671875</td><td>42.96875</td><td>VOF249</td><td>4.500787402</td><td>64.05512</td></tr><tr><td>VOF122</td><td>2.4015625</td><td>44.0625</td><td>VOF255</td><td>4.6</td><td>65</td></tr><tr><td>VOF128</td><td>2.5</td><td>45</td><td></td><td></td><td></td></tr></tbody></table> <p><b>The symptom is case of mis-adjustment</b></p> <p>If the VOFS Voltage adjustment is not performed properly, dots like blinking luminance points appear. If deviated greatly from the right adjustment point, panel will light white.</p>	Input Command	DAC Output	Setting Voltage	Input Command	DAC Output	Setting Voltage	VOF000	0.4	25	VOF134	2.599212598	45.94488	VOF006	0.4984375	25.9375	VOF141	2.71496063	47.04724	VOF013	0.61328125	27.03125	VOF147	2.814173228	47.99213	VOF019	0.71171875	27.96875	VOF153	2.913385827	48.93701	VOF026	0.8265625	29.0625	VOF160	3.029133858	50.03937	VOF032	0.925	30	VOF166	3.128346457	50.98425	VOF038	1.0234375	30.9375	VOF172	3.227559055	51.92913	VOF045	1.13828125	32.03125	VOF179	3.343307087	53.0315	VOF051	1.23671875	32.96875	VOF185	3.442519685	53.97638	VOF058	1.3515625	34.0625	VOF191	3.541732283	54.92126	VOF064	1.45	35	VOF198	3.657480315	56.02362	VOF070	1.5484375	35.9375	VOF204	3.756692913	56.9685	VOF077	1.66328125	37.03125	VOF211	3.872440945	58.07087	VOF083	1.76171875	37.96875	VOF217	3.971653543	59.01575	VOF090	1.8765625	39.0625	VOF223	4.070866142	59.96063	VOF096	1.975	40	VOF230	4.186614173	61.06299	VOF102	2.0734375	40.9375	VOF236	4.285826772	62.00787	VOF109	2.18828125	42.03125	VOF242	4.38503937	62.95276	VOF115	2.28671875	42.96875	VOF249	4.500787402	64.05512	VOF122	2.4015625	44.0625	VOF255	4.6	65	VOF128	2.5	45			
	Input Command	DAC Output	Setting Voltage	Input Command	DAC Output	Setting Voltage																																																																																																																																
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VOF128	2.5	45																																																																																																																																				
	VR2703 (VH) (Y DRIVE Assy)	<p><b>VH (voltage for scan IC) Adjustment</b></p> <p>Adjust so that the voltage between K2716 (VH) and K2720 (PSUS) becomes <math>103V \pm 0.5V</math>. PSUS (=GNDH) is a floating GND and the electric potential is different from that of chassis GND. Be sure not to short-circuit PSUS (=GNDH) and another GND, because that may damage the unit.</p> <p><b>The symptom is case of mis-adjustment</b></p> <p>If the VH adjustment is not performed properly, dots like blinking luminance points appear. If deviated greatly from the right adjustment point, panel will light white.</p>																																																																																																																																				
	VR2702 (IC5V) (Y DRIVE Assy)	<p><b>IC5V Adjustment</b></p> <p>Adjust so that the voltage between K2707 (IC5V) and K2720 (PSUS) becomes <math>5.0V \pm 0.1V</math>. PSUS (=GNDH) is a floating GND and the electric potential is different from that of chassis GND. Be sure not to short-circuit PSUS (=GNDH) and another GND, because that may damage the unit.</p>																																																																																																																																				
Note : Be sure to measure between specified test points.																																																																																																																																						

## ■ Sustain Pulse Waveform Adjustment

Input Signal	Adjusting Point	Adjusting Method
White 100%	REF_DIG mode in Factory mode X-SUS-B : key 9 Y-SUS-B : key 11	<b>X-SUS-B, Y-SUS-B Adjustment</b> Set to the indicated value with a key on the remote control unit. (Refer to "Timing adjustment of control signal of X and Y Drive Assys".)

## ■ VRN Voltage Adjustment

Input Signal	Adjusting Point	Adjusting Method
White 100%	VR3701 (VRN) (X DRIVE Assy)	<b>VRN (minus reset voltage adjustment)</b> Adjust so that the voltage between K3707 (VRN) and K3702 (SUS-GND) becomes $-280V \pm 1.0V$ .

## ■ Panel White Balance Adjustment

Input Signal	Adjusting Point	Adjusting Method									
		<p>Adjust the parameter in the OFFSET-DIGITAL of factory mode as follows;</p> <div style="text-align: center;"> <div style="display: inline-block; vertical-align: middle;"> PANEL R-HIGH  <span style="font-size: 2em; vertical-align: middle;">}</span>  PANEL B-LOW </div> </div> <p>In this time, display uses the mask (MASK04) of factory mode.</p> <p>Reference : Adjustment values using the Media color-difference meter (A-100)</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th><th>MASK Left Side</th><th>MASK Right Side</th></tr> </thead> <tbody> <tr> <td>x</td><td>293</td><td>292</td></tr> <tr> <td>y</td><td>308</td><td>296</td></tr> </tbody> </table>		MASK Left Side	MASK Right Side	x	293	292	y	308	296
	MASK Left Side	MASK Right Side									
x	293	292									
y	308	296									

## ■ Mask Level Adjustment

Input Signal	Adjusting Point	Adjusting Method
	VIDEO OPTION mode in Factory mode SIDE MASK LEV. R SIDE LEVEL : key 1 G SIDE LEVEL : key 2 B SIDE LEVEL : key 3	<b>Side mask color / Level Adjustment</b> Set the indicated value with the keys on the remote control unit.

## ■ Color Balance Adjustment

Input Signal	Adjusting Point	Adjusting Method																																											
Fresh color	REFERENCE1 mode in Factory mode COLOR : key 3 TINT : key 4	<p><b>Color Balance Adjustment</b></p> <p>After adjusting the white balance, check the flesh color of figures in LD still pictures. If the color is not natural, adjust it with the keys on the remote control unit.</p> <p>Reference : Adjustment values using the Media color-difference meter (A-100)</p> <table><tr><th></th><th></th><th></th><th>NTSC</th><th>HD</th><th>PC</th></tr><tr><td rowspan="6">White Balance</td><td rowspan="3">20% window-step signal (-3dB)</td><td>x</td><td>294</td><td>294</td><td>294</td></tr><tr><td>y</td><td>303</td><td>303</td><td>304</td></tr><tr><td>Y</td><td>6.9</td><td>6.9</td><td>2.8</td></tr><tr><td rowspan="3">80% window-step signal (-3dB)</td><td>x</td><td>293</td><td>293</td><td>297</td></tr><tr><td>y</td><td>301</td><td>301</td><td>312</td></tr><tr><td>Y</td><td>151</td><td>151</td><td>65</td></tr><tr><td rowspan="2">Flesh Color</td><td rowspan="2">Window chroma signal</td><td>x</td><td>423</td><td>423</td><td>—</td></tr><tr><td>y</td><td>363</td><td>363</td><td>—</td></tr></table>				NTSC	HD	PC	White Balance	20% window-step signal (-3dB)	x	294	294	294	y	303	303	304	Y	6.9	6.9	2.8	80% window-step signal (-3dB)	x	293	293	297	y	301	301	312	Y	151	151	65	Flesh Color	Window chroma signal	x	423	423	—	y	363	363	—
			NTSC	HD	PC																																								
White Balance	20% window-step signal (-3dB)	x	294	294	294																																								
		y	303	303	304																																								
		Y	6.9	6.9	2.8																																								
	80% window-step signal (-3dB)	x	293	293	297																																								
		y	301	301	312																																								
		Y	151	151	65																																								
Flesh Color	Window chroma signal	x	423	423	—																																								
		y	363	363	—																																								

## ■ Timing Adjustment of X and Y DRIVE Assys Control Signal

### ● Purpose

- Pulse module loads in DRIVE Assy as one of heat measures of DRIVE Assy. Adjust the drive timing of the pulse module driving parallel with VR.
- Pulse module has each peculiar delay time. Readjustment is necessary when replaced the pulse module in the X and Y DRIVE Assys.

### ● Adjustment Method

CR delay circuit is each inserted on signal path of four control signals (SUS-U, SUS-B, SUS-D, SUS-G) driving the pulse module.

Quantity of delay can adjust pulse module of one side with VR.

Adjust VR while measuring a waveform of the pulse module, and match a timing.

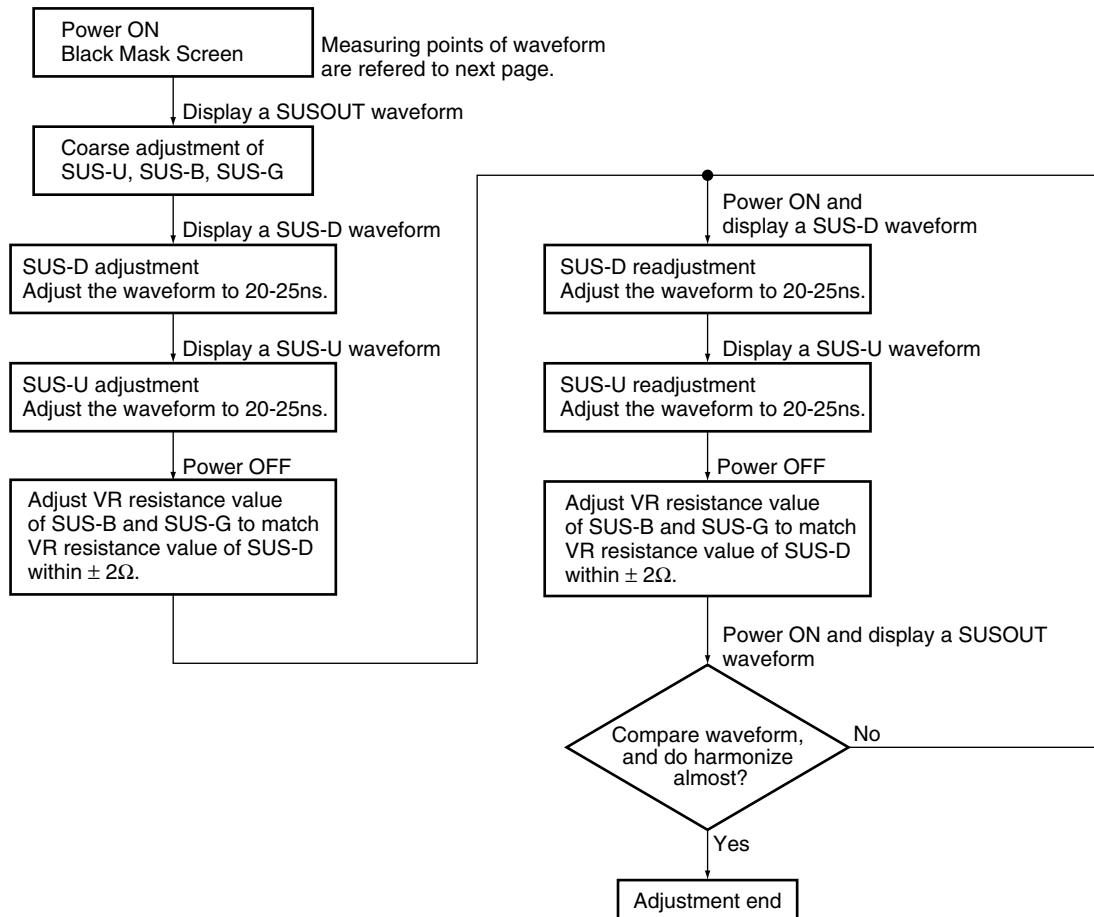
**Adjustment VR**

	X DRIVE	Y DRIVE
SUS-U	VR3203	VR2204
SUS-D	VR3202	VR2203
SUS-B	VR3201	VR2202
SUS-G	VR3200	VR2201

**Test pin for adjustment and measurement**

Pulse Module	X DRIVE		Y DRIVE	
	Upper	Lower	Upper	Lower
SUSOUT	K3105	K3106	K2212	K2203
SUS-U	K3200	K3204	K2220	K2224
SUS-D	K3108	K3205	K2207	K2225

### ● Adjustment Procedure



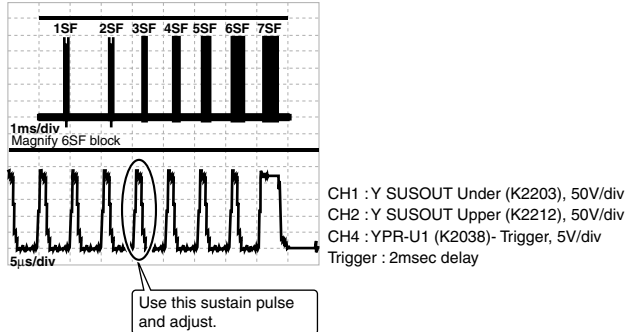
As for this adjustment, adjustment with set state is difficult.  
Therefore replace it every Assy when replacing the pulse module.

## Measuring Waveform of Pulse Module Timing Adjustment

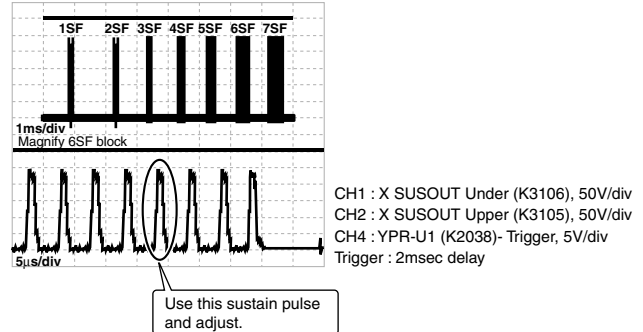
Timing adjustment of the pulse module control signal adjusts with the sustain pulse of eighth pulse (X DRIVE) and the ninth pulse (Y DRIVE) from the back of 6SF.

### Measuring point of waveform

#### Y DRIVE SUSOUT waveform



#### X DRIVE SUSOUT waveform



- Perform adjustment of waveform with a black mask screen.
- It is easy to adjust when turned field AB offset to OFF (RS-232C command: OCN) in adjustment.

#### Note:

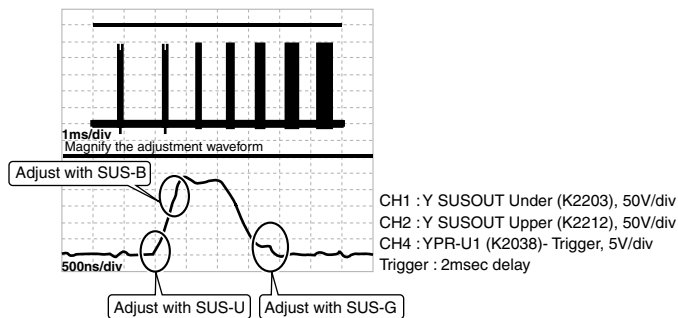
- Sampling rate of oscilloscope sets it more than 500MS/s in order to perform ns order adjustment.
- Collecting calibration of probe before adjustment by all means.
- Connect GND of probe measuring waveform to SUSGND terminal by all means.
- Precise waveform is not displayed, and an adjustment gap may occur that does not collect GND properly.

When took waveform be each drive Assy unit, measure it at the fourth sustain pulse from the back except for a large width sustain pulse.

Therefore, when measured both waveform of the X and Y drives together, it becomes the sustain pulse of 8 and 9 pulses from the back.

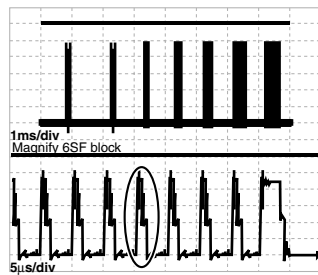
### Waveform coarse adjustment

#### Measure the SUSOUT waveform

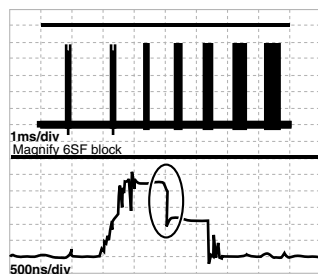


When there is a gap with waveform of CH1 / CH2 of the part which enclosed in the following circle, adjust required VR to overlap the waveform.

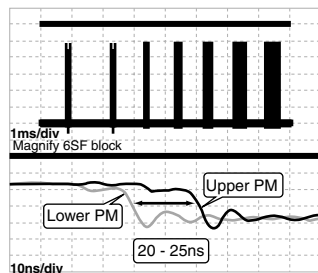
## ● SUS-D Adjustment (Y DRIVE)



Magnification

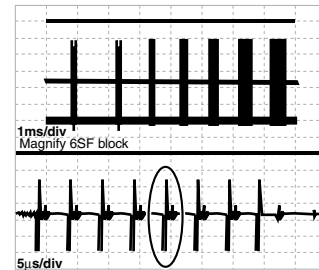


Magnification

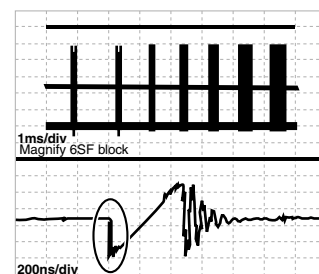


CH1 : Y SUS-D Under (K2225), 50V/div  
CH2 : Y SUS-D Upper (K2207), 50V/div  
CH4 : YPR-U1 (K2038)- Trigger, 5V/div  
Trigger : 2msec delay

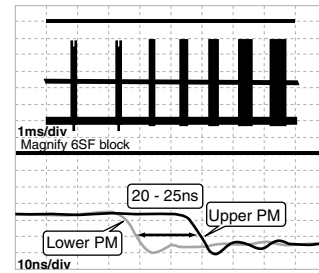
## ● SUS-U Adjustment (Y DRIVE)



Magnification



Magnification

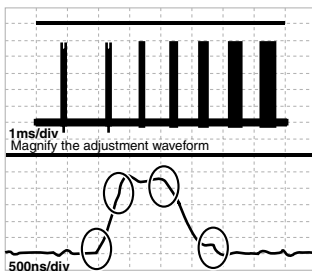


CH1 : Y SUS-U Under (K2224), 50V/div  
CH2 : Y SUS-U Upper (K2220), 50V/div  
CH4 : YPR-U1 (K2038)- Trigger, 5V/div  
Trigger : 2msec delay

**Caution:**  
Not absolutely mistaking upper and lower of waveform.

## ● Waveform Confirmation in Adjustment completion

Measure the SUSOUT waveform



CH1 : Y SUSOUT Under (K2203), 50V/div  
CH2 : Y SUSOUT Upper (K2212), 50V/div  
CH4 : YPR-U1 (K2038)- Trigger, 5V/div  
Trigger : 2msec delay

Confirm it to waveform of CH1 / CH2 of the part which enclosed in the following circle whether there is not a large gap.  
(A gap of the quantity that shifts 20nS and adjusted remains.)

When adjust in the power supply ON state, change so that the quantity of gap that adjusted by temperature-rise of the pulse module becomes small.  
Therefore, perform high power OFF (RS-232C command: DRF) except measurement time of waveform when adjusts, and adjustment error by temperature-rise does not occur.

## ■ SUS-B Ground Timing Adjustment

It is necessary to readjust this adjustment when replaced the X or Y DRIVE Assy and the pulse module.

### ● Measurement point and method

Measurement point

X DRIVE Assy :

SUSOUT A : K3105 , GND : K3201

Y DRIVE Assy :

SUSOUT B : K32212 GND : K2219

Measurement screen : PC 60Hz at all black screen

RS-232C command

PC60Hz : F61, Black mask : M61

The measurement is easy to perform when turns field AB alternation to OFF. (RS-232C command: OCN)

### Measurement procedure

Measure a sustain pulse of the fourth pulse (X DRIVE) and the fifth pulse (Y DRIVE) from the back of the 5th FS.

1. Check the ground voltage.
2. Shift a ground timing to the front till the ground voltage is below 180V enough.
3. Delays a ground timing by one clock, and set a ground timing to the best voltage that does not exceed 180V.

### Adjustment parameter

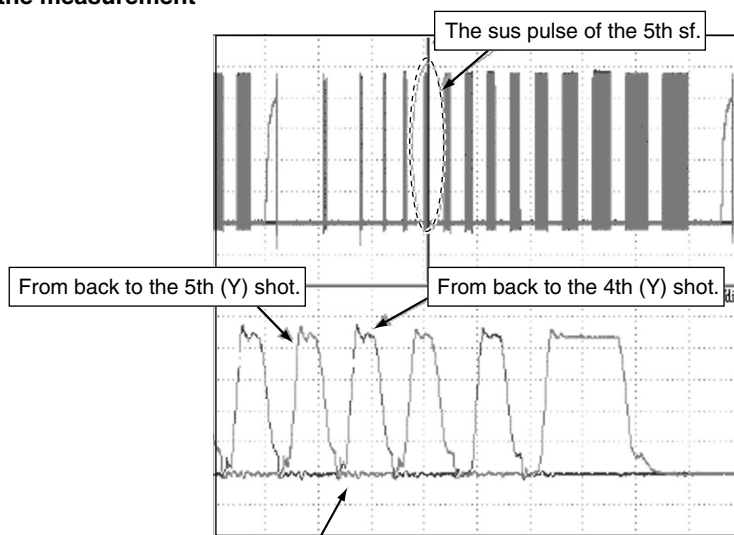
X DRIVE: XSUSB (RS-232C command : XSB)

Y DRIVE: YSUSB (RS-232C command : YSB)

### Note:

- Connect GND of probe measuring waveform to SUSGND terminal by all means.
- Precise waveform is not displayed, and an adjustment gap may occur that does not collect GND properly.

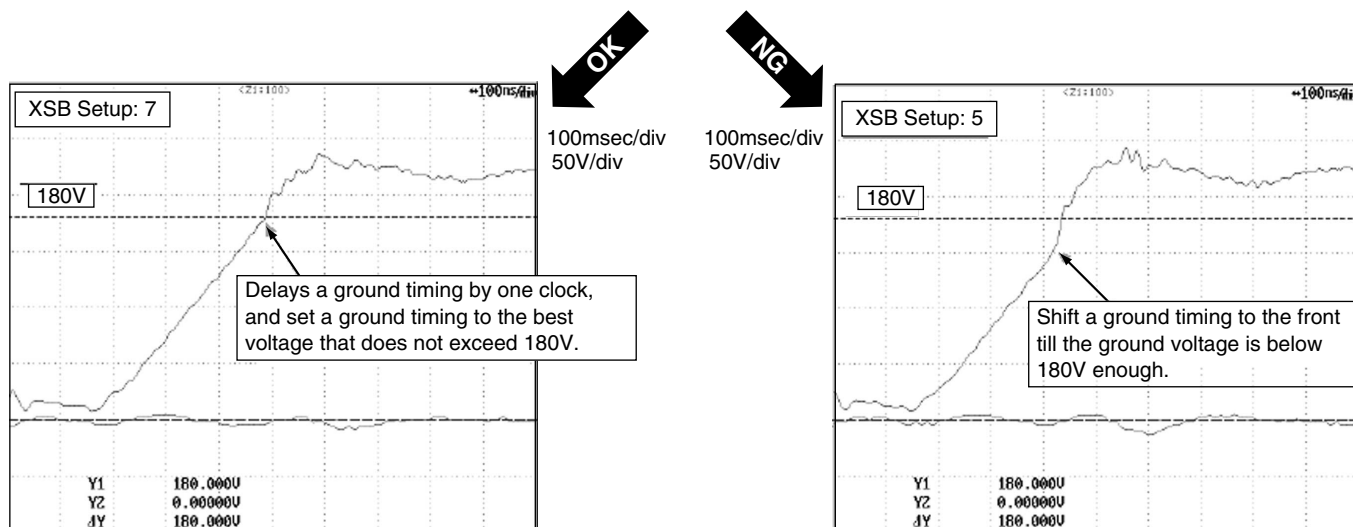
### ● Waveform in the measurement



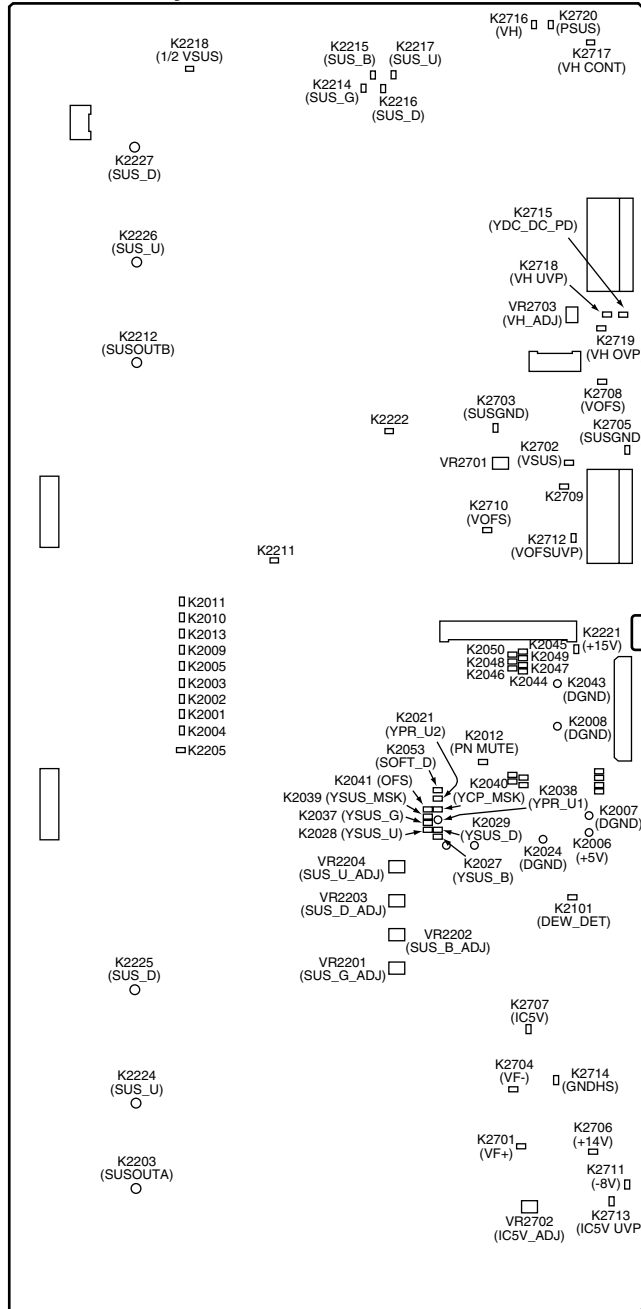
CH1 : Y SUSOUT (K2203), 50V/div  
CH2 : X SUSOUT (K3106), 50V/div  
CH4 : YPR-U1 (K2038)- Trigger, 5V/div  
Trigger : 2msec delay

Measure a waveform of this section and adjust.

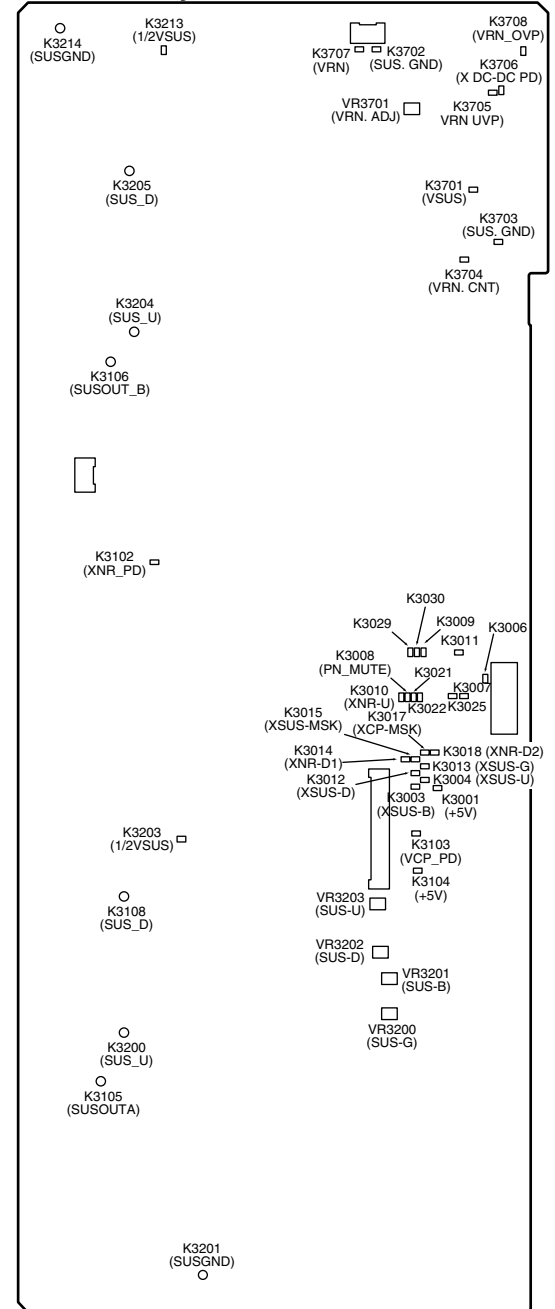
Magnify the fourth pulse sustain pulse (XSUSOUT waveform) from the back of the above waveform.



## Y DRIVE Assy



## X DRIVE Assy



Adjusting Points



## 6.4 COMMAND

### 6.4.1 RS-232C COMMAND (for adjustment)

	Command	Name	Function	RS-232C Factory	RS-232C Integrator	Normal Validity	Direct Validity	UP/DOWN Validity
<b>A</b>	ABL	ABL	ABL level adjustment	O	—	—	O	O
	BRT	BRIGHT	Brightness adjustment	O	O	—	O	O
<b>B</b>	BHI	B HIGH	B HIGH adjustment	O	O	—	O	O
	BLW	B LOW	B LOW adjustment	O	O	—	O	O
	BSL	B SIDE MASK LEVEL	B SIDE MASK LEVEL adjustment	O	O	—	O	O
	BHA	AD B HIGH	AD B HIGH adjustment	O	—	—	O	O
	BLA	AD B LOW	AD B LOW adjustment	O	—	—	O	O
	CNT	CONTRAST	Contrast adjustment	O	O	—	O	O
<b>C</b>	COL	COLOR	Color adjustment	O	O	—	O	O
	CDR	CDR OFFSET	CDR OFFSET adjustment	O	—	—	O	O
	CDB	CDB OFFSET	CDB OFFSET adjustment	O	—	—	O	O
	CTI	CD TINT	Chroma decode TINT adjustment	O	—	—	O	O
	CPH	CLOCK PHASE	PLL phase adjustment	O	O	—	O	O
	CFR	CLOCK FREQUENCY	PLL frequency adjustment	O	O	—	O	O
<b>D</b>	DW0	DOWN 10	Turn the adjustment value to 10 DOWN	O	O	O	—	—
	DWn	DOWN n	Turn the adjustment value to n DOWN (n = 1, 2, • • • 8, 9)	O	O	O	—	—
	DWF	DOWN FULL	Turn the adjustment value to minimum	O	O	O	—	—
<b>G</b>	GHI	G HIGH	G HIGH adjustment	O	O	—	O	O
	GLW	G LOW	G LOW adjustment	O	O	—	O	O
	GSL	G SIDE MASK LEVEL	G SIDE MASK LEVEL adjustment	O	O	—	O	O
	GHA	AD G HIGH	AD G HIGH adjustment	O	—	—	O	O
	GLA	AD G LOW	AD G LOW adjustment	O	—	—	O	O
	LRY	R-Y LEVEL	R-Y level adjustment	O	—	—	O	O
<b>L</b>	LBV	B-Y LEVEL	B-Y level adjustment	O	—	—	O	O
	MCT	MAT CONTRAST	MAT CONTRAST adjustment	O	—	—	O	O
<b>M</b>	MBR	MAT BRIGHT	MAT BRIGHT adjustment	O	—	—	O	O
	MCL	MAT COLOR	MAT COLOR adjustment	O	—	—	O	O
	MTI	MAT TINT	MAT TINT adjustment	O	—	—	O	O
	MCA	AD MAIN CONTRAST	AD MAIN CONTRAST adjustment	O	—	—	O	O
	PBH	PANEL BLUE HIGH	BLUE HIGH-LIGHT adjustment	O	—	—	O	O
	PBL	PANEL BLUE LOW	BLUE LOW-LIGHT adjustment	O	—	—	O	O
<b>P</b>	PGH	PANEL GREEN HIGH	GREEN HIGH-LIGHT adjustment	O	—	—	O	O
	PGL	PANEL GREEN LOW	GREEN LOW-LIGHT adjustment	O	—	—	O	O
	PRH	PANEL RED HIGH	RED HIGH-LIGHT adjustment	O	—	—	O	O
	PRL	PANEL RED LOW	RED LOW-LIGHT adjustment	O	—	—	O	O
	RHI	R HIGH	R HIGH adjustment	O	O	—	O	O
	RLW	R LOW	R LOW adjustment	O	O	—	O	O
<b>R</b>	RSL	R SIDE MASK LEVEL	R SIDE MASK LEVEL adjustment	O	O	—	O	O
	RHA	AD R HIGH	AD R HIGH adjustment	O	—	—	O	O
	RLA	AD R LOW	AD R LOW adjustment	O	—	—	O	O
	SV1	SUB VOLUME INPUT1	Adjust the sub-volume of INPUT1	O	O	—	O	O
	SV2	SUB VOLUME INPUT2	Adjust the sub-volume of INPUT2	O	O	—	O	O
	SV3	SUB VOLUME INPUT3	Adjust the sub-volume of INPUT3	O	O	—	O	O
<b>S</b>	SV4	SUB VOLUME INPUT4	Adjust the sub-volume of INPUT4	O	O	—	O	O
	SV5	SUB VOLUME INPUT5	Adjust the sub-volume of INPUT5	O	O	—	O	O
	SHP	H.SHARP	H.SHARP/H.ENHANCE adjustment	O	O	—	O	O
	SHV	V.SHARP	V.SHARP/V.ENHANCE adjustment	O	O	—	O	O
	TNT	TINT	TINT adjustment	O	O	—	O	O
	UP0	UP10	Turn the adjustment value to 10 UP	O	O	O	—	—
<b>U</b>	UPn	UPn	Turn the adjustment value to n UP (n = 1, 2, • • • 8, 9)	O	O	O	—	—
	UPF	UP FULL	Turn the adjustment value to maximum	O	O	O	—	—
	VOF	VOFFSET ADJUST	Vofs adjustment	O	—	—	O	O
<b>V</b>	VOL	VOLUME	Audio volume adjustment	O	O	O	O	O
	VSU	VSUS ADJUST	Vsus adjustment	O	—	—	O	O
	VPS	VERTICAL POSITION	Adjust the vertical position	O	O	—	O	O
	VSI	VERTICAL SIZE	Adjust the vertical size	O	O	—	O	O
	XSB	XSUS B	X-SUS-B pulse adjustment	O	—	—	O	O
	XSG	XSUS G	X-SUS-G pulse adjustment	O	—	—	O	O
<b>Y</b>	YSB	YSUS B	Y-SUS-B pulse adjustment	O	—	—	O	O
	YSG	YSUS G	Y-SUS-G pulse adjustment	O	—	—	O	O
	YDL	Y-DELAY	Y-DELAY adjustment	O	—	—	O	O
	YOL	Y-OUT LEVEL	Y-OUT LEVEL adjustment	O	—	—	O	O

## 6.4.2 RS-232C COMMAND (for setting)

	Command	Name	Function	RS-232C Factory	RS-232C Integrator	Normal Validity	Direct Validity	UP/DOWN Validity
A	AJN	ADJUST NO	Complete the RS-232C integrator mode	—	O	—	—	—
	AJY	ADJUST YES	Start the RS-232C integrator mode	—	—	O	—	—
	AMN	AUDIO MUTE NO	Turn the audio mute to OFF	O	O	O	—	—
	AMY	AUDIO MUTE YES	Turn the audio mute to ON	O	O	O	—	—
	AB0	ABL MODE0	Set the ABL setting to MODE0 (REFERENCE)	O	—	—	—	—
	AB1	ABL MODE1	Set the ABL setting to MODE1 (PC)	O	—	—	—	—
	AB2	ABL MODE2	Set the ABL setting to MODE2 (VIDEO60Hz)	O	—	—	—	—
B	AB3	ABL MODE3	Set the ABL setting to MODE3 (VIDEO50Hz)	O	—	—	—	—
	BBY	VIDEO RGB YES	Set the signal format to VIDEO RGB	O	O	—	—	—
	BR1	BAUD RATE1	Set the RS-232C baud rate to 1200BPS	O	O	—	—	—
	BR2	BAUD RATE2	Set the RS-232C baud rate to 2400BPS	O	O	—	—	—
	BR3	BAUD RATE3	Set the RS-232C baud rate to 4800BPS	O	O	—	—	—
	BR4	BAUD RATE4	Set the RS-232C baud rate to 9600BPS	O	O	—	—	—
	BR5	BAUD RATE5	Set the RS-232C baud rate to 19200BPS	O	O	—	—	—
C	BR6	BAUD RATE6	Set the RS-232C baud rate to 38400BPS	O	O	—	—	—
	CM1	COLOR MODE 1	Set to COLOR MODE 1	O	O	O	—	—
	CM2	COLOR MODE 2	Set to COLOR MODE 2	O	O	O	—	—
	CP1	VIDEO COMPONENT1 YES	Set the signal format to VIDEO COMPONENT1	O	O	—	—	—
	CP2	VIDEO COMPONENT2 YES	Set the signal format to VIDEO COMPONENT2	O	O	—	—	—
	CDE	COLOR DETECT EURO	Set the color detect to EURO	O	O	—	—	—
	CDM	COLOR DETECT ALL	Set the color detect to ALL	O	O	—	—	—
	CDA	COLOR DETECT SA	Set the color detect to SA	O	O	—	—	—
	CT1	COLOR TEMP.1	Set the color temperature to -3000K equivalency	O	O	—	—	—
	CT2	COLOR TEMP.2	Set the color temperature to -2000K equivalency	O	O	—	—	—
	CT3	COLOR TEMP.3	Set the color temperature to $\pm$ 0K equivalency	O	O	—	—	—
	CT4	COLOR TEMP.4	Set the color temperature to +1000K equivalency	O	O	—	—	—
	CT5	COLOR TEMP.5	Set the color temperature to +2000K equivalency	O	O	—	—	—
	CL1	CLAMP MODE1	Set the clamp position to AUTO	O	O	—	—	—
	CL2	CLAMP MODE2	Set the clamp position to fix	O	O	—	—	—
D	DIN	OSD DISPLAY NO	Prohibit OSD display	O	O	O	—	—
	DIY	OSD DISPLAY YES	Permit OSD display	O	O	O	—	—
	DOF	DISPLAY OFF	Turn the OSD display to OFF	O	O	O	—	—
	DRN	DRIVE ON	Turn the drive to ON	It is valid in the RS-232C factory and STB			—	—
	DRF	DRIVE OFF	Turn the drive to OFF				—	—
	DSP	INPUT SIGNAL DISPLAY	Display current input signal information	O	O	—	—	—
	DS2	DISPLAY2	Display current various information	O	O	—	—	—
E	EWY	EEPROM WRITE YES	Start the Plug & Play EEPROM writing mode	O	—	—	—	—
	EWN	EEPROM WRITE NO	Complete the Plug & Play EEPROM writing mode	O	—	—	—	—
F	FAN	FACTORY ADJUST NO	Complete the factory adjustment mode	O	—	—	—	—
	FAY	FACTORY ADJUST YES	Start the factory adjustment mode	—	—	O	—	—
	FST	FINAL SET UP	Turn various setting into the Shipping state	O	—	—	—	—
	FRP	FRESH POSITION	Initialize SCREEN value of integrator	O	O	—	—	—
	FCA	FAN CONTROL AUTO	Turn the fan roll control to AUTO	O	O	—	—	—
	FCM	FAN CONTROL MAX	Turn the fan roll control to MAX	O	O	—	—	—
	FMY	FULL MASK YES	Set to FULL MASK (white)	—	O	—	—	—
	FMR	FULL MASK RED	Set to FULL MASK (red)	—	O	—	—	—
	FMG	FULL MASK GREEN	Set to FULL MASK (green)	—	O	—	—	—
	FMB	FULL MASK BLUE	Set to FULL MASK (blue)	—	O	—	—	—
	FMN	FULL MASK NO	Release the FULL MASK	—	O	—	—	—
	FXO	FIX OUTPUT	Set the audio output to fix	O	O	—	—	—
	F50	FREE RUN 50Hz	Set the free-running to Video 50Hz in the MASK setting	O	—	—	—	—
	F60	FREE RUN 60Hz	Set the free-running to Video 60Hz in the MASK setting	O	—	—	—	—
	F61	FREE RUN PC 60Hz	Set the free-running to Pc 60Hz in the MASK setting	O	—	—	—	—
	F70	FREE RUN 70Hz	Set the free-running to Video 70Hz in the MASK setting	O	—	—	—	—
G	GAJ	GET ADJUST	Get a various adjustment value of the display from EEPROM	O	—	—	—	—
	GPW	GET PANEL W/B	Get the panel W/B information from EEPROM	O	—	—	—	—
	GS1	GET STATUS 1	Get the version information of microcomputer from EEPROM	O	—	—	—	—
	GS2	GET STATUS 2	Get the PD information and temperature information from EEPROM	O	—	—	—	—
	GPS	GET POSITION DATA	TxD outputs the positioning data	O	O	O	—	—
	GSO	GET STATUS OPTION	TxD outputs data of various established state (OPTION)	O	O	O	—	—
	GSS	GET STATUS SET UP	TxD outputs data of various established state (SET UP)	O	O	O	—	—
	GAS	GET ADJUST SLOT	TxD outputs data of picture quality setting of SLOT	O	—	—	—	—
	GAR	GET ADJUST RGB	TxD outputs data of picture quality adjustment (RGB 1)	O	—	—	—	—

# PDP-433CMX, PDP-433MXE

	Command	Name	Function	RS-232C Factory	RS-232C Integrator	Normal Validity	Direct Validity	UP/DOWN Validity
<b>G</b>	GWB	GET WHITE BALANCE	TxD outputs data of picture quality setting of RGB1	0	0	0	—	—
	GPD	GET POWER DOWN	TxD outputs POWER DOWN information	0	—	—	—	—
<b>H</b>	HCN	HIGH CONTRAST NO	Turn the high contrast setting to OFF	0	0	—	—	—
	HCY	HIGH CONTRAST YES	Turn the high contrast setting to ON	0	0	—	—	—
	HMS	HOURLY METER SET	Set the hour meter to optional time	0	—	—	0	—
	HMD	HOURLY METER DISP.	Display the hour meter	0	0	—	—	—
	H80	HDTV MODE 1080 i	Set the HDTV mode to 1080 i	0	0	—	—	—
	H35	HDTV MODE 1035 i	Set the HDTV mode to 1035 i	0	0	—	—	—
<b>I</b>	IN1	INPUT1	Selects INPUT1	0	0	0	—	—
	IN2	INPUT2	Selects INPUT2	0	0	0	—	—
	IN3	INPUT3	Selects INPUT3	0	0	0	—	—
	IN4	INPUT4	Selects INPUT4	0	0	0	—	—
	IN5	INPUT5	Selects INPUT5	0	0	0	—	—
	IMN	INTEGRATOR MODE NO	Set the integrator mode to LOCK	0	—	—	—	—
	IMY	INTEGRATOR MODE YES	Set the integrator mode to UNLOCK	0	—	—	—	—
	IDC	ID CLEAR	Clear the ID	0	0	—	—	—
<b>K</b>	IDS	ID SET	Set the ID	0	0	—	0	—
	KLN	KEY LOCK NO	Permit main unit key / remote control unit operation	0	0	—	—	—
<b>M</b>	KLY	KEY LOCK YES	Prohibit main unit key / remote control unit operation	0	0	—	—	—
	M00	MASK 00	Mask mode OFF	0	—	—	—	—
<b>M</b>	M01	MASK 01	Pattern 1 (ramp)	0	—	—	—	—
	M02	MASK 02	Pattern 2 (color bar)	0	—	—	—	—
	M03	MASK 03	Pattern 3 (slanting line)	0	—	—	—	—
	M04	MASK 04	Pattern 4 (for W/B measurement)	0	—	—	—	—
	M05	MASK 05	Pattern 5 (for W/B adjustment)	0	—	—	—	—
	M06	MASK 06	Pattern 6 (for W/B peak measurement)	0	—	—	—	—
	M07	MASK 07	Pattern 7 (for peak measurement)	0	—	—	—	—
	M08	MASK 08	Pattern 8 (reservation)	0	—	—	—	—
	M09	MASK 09	Pattern 9 (for SCAN IC protect test)	0	—	—	—	—
	M10	MASK 10	Pattern 10 (for SCAN IC protect test)	0	—	—	—	—
	M11	MASK 11	Pattern 11 (reservation)	0	—	—	—	—
	M12	MASK 12	Pattern 12 (reservation)	0	—	—	—	—
	M13	MASK 13	Pattern 13 (reservation)	0	—	—	—	—
	M14	MASK 14	Pattern 141 (reservation)	0	—	—	—	—
	M51	MASK 51	Full mask (white)	0	—	—	—	—
	M52	MASK 52	Full mask (cyan 274)	0	—	—	—	—
	M53	MASK 53	Full mask (magenta 1023)	0	—	—	—	—
	M54	MASK 54	Full mask (fresh color)	0	—	—	—	—
	M55	MASK 55	Full mask (cyan 1023)	0	—	—	—	—
	M56	MASK 56	Full mask (light purple)	0	—	—	—	—
	M57	MASK 57	Full mask (sky blue)	0	—	—	—	—
	M58	MASK 58	Full mask (red)	0	—	—	—	—
	M59	MASK 59	Full mask (green)	0	—	—	—	—
	M60	MASK 60	Full mask (blue)	0	—	—	—	—
	M61	MASK 61	Full mask (black)	0	—	—	—	—
	M62	MASK 62	Full mask (red 779)	0	—	—	—	—
	M63	MASK 63	Full mask (cyan 218)	0	—	—	—	—
	M64	MASK 64	Full mask (cyan 444)	0	—	—	—	—
	M65	MASK 65	Full mask (fresh color 43)	0	—	—	—	—
	M66	MASK 66	Full mask (red 620)	0	—	—	—	—
	M67	MASK 67	Full mask (magenta 98)	0	—	—	—	—
	M68	MASK 68	Full mask (sky blue1_43)	0	—	—	—	—
	M69	MASK 69	Full mask (sky blue2_43)	0	—	—	—	—
	M70	MASK 70	Full mask (light purple 43)	0	—	—	—	—
	M71	MASK 71	Full mask (yellow)	0	—	—	—	—
	M72	MASK 72	Full mask (blue 916)	0	—	—	—	—
	M73	MASK 73	Full mask (reservation)	0	—	—	—	—
	M74	MASK 74	Full mask (reservation)	0	—	—	—	—
	MG1	2X2MODE LEFT UPPER	Four enlarged setting: Upper left	0	0	—	—	—
	MG2	2X2MODE LEFT LOWER	Four enlarged setting: Lower left	0	0	—	—	—
	MG3	2X2MODE RIGHT UPPER	Four enlarged setting: Upper right	0	0	—	—	—
	MG4	2X2MODE RIGHT LOWER	Four enlarged setting: Lower right	0	0	—	—	—
	MGY	2X2MODE YES	Turn the four sides multi to ON	0	0	0	—	—
	MGN	2X2MODE NO	Turn the four sides multi to OFF	0	0	0	—	—

	Command	Name	Function	RS-232C Factory	RS-232C Integrator	Normal Validity	Direct Validity	UP/DOWN Validity
<b>M</b>	MMN	MIRROR MODE NO	Turn the mirror mode to OFF (normal display)	0	0	0	–	–
	MMX	MIRROR MODE X	Right and left reversing display	0	0	0	–	–
	MMY	MIRROR MODE Y	Top and bottom reversing display	0	0	0	–	–
	MMZ	MIRROR MODE XY	Top and bottom / right and left reversing display	0	0	0	–	–
	MTN	VIDEO MUTE NO	Turn the video mute of IC30 to OFF	0	0	0	–	–
	MTY	VIDEO MUTE YES	Turn the video mute of IC30 to ON	0	0	0	–	–
	MCY	MASK CONTROL YES	Permit automatic mask display position setting	0	0	–	–	–
<b>N</b>	MCN	MASK CONTROL NO	Release automatic mask display position setting	0	0	–	–	–
	NMY	NEGATIVE MODE YES	Turn the inverse mode (negative positive inverting) to ON	0	0	–	–	–
	NMN	NEGATIVE MODE NO	Turn the inverse mode (negative positive inverting) to OFF	0	0	–	–	–
	NTS	COLOR SYSTEM NTSC	Turn the COLOR SYSTEM setting to NTSC	0	0	–	–	–
	NT4	COLOR SYSTEM 4.43NTSC	Turn the COLOR SYSTEM setting to 4.43NTSC	0	0	–	–	–
	NRN	DIGITAL NR OFF	Turn the DIGITAL NR setting to OFF	0	0	–	–	–
	NRL	DIGITAL NR LOW	Turn the DIGITAL NR setting to LOW	0	0	–	–	–
<b>O</b>	NRM	DIGITAL NR MIDDLE	Turn the DIGITAL NR setting to MIDDLE	0	0	–	–	–
	NRH	DIGITAL NR HIGH	Turn the DIGITAL NR setting to HIGH	0	0	–	–	–
	OFY	OFFSET YES	Turn the OFFSET adjustment mode to ON	0	–	–	–	–
	OCY	FIELD OFFSET CHANGE YES	Turn the field AB offset to ON	0	–	–	–	–
	OCN	FIELD OFFSET CHANGE NO	Turn the field AB offset to OFF	0	–	–	–	–
	OMY	ORBITER MODE YES	Turn the orbiter mode to ON	0	0	–	–	–
	OMN	ORBITER MODE NO	Turn the orbiter mode to OFF	0	0	–	–	–
<b>P</b>	PAF	ACL SW OFF	Turn the ACL SW to OFF	0	–	–	–	–
	PAL	COLOR SYSTEM PAL	Turn the COLOR SYSTEM setting to PAL	0	0	–	–	–
	PAN	ACL SW ON	Turn the ACL SW to ON	0	–	–	–	–
	PCY	PC RGB YES	Turn the INPUT setting to PC: RGB (VGA or XGA)	0	0	–	–	–
	PWY	PC WIDE YES	Turn the INPUT setting to PC: RGB (WVGA or WXGA)	0	0	–	–	–
	PLN	BRIGHT ENHANCE OFF	Turn the center brightness correction function to OFF	0	0	–	–	–
	PLY	BRIGHT ENHANCE ON	Turn the center brightness correction function to ON	0	0	–	–	–
	PMS	PULSE METER SET	Set the pulse meter	0	–	–	0	–
	PMD	PULSE METER DISP	Display the pulse meter	0	–	–	–	–
	PMY	COLOR SYSTEM PAL-M	Turn the COLOR SYSTEM setting to PAL-M	0	0	–	–	–
	PNY	COLOR SYSTEM PAL-N	Turn the COLOR SYSTEM setting to PAL-N	0	0	–	–	–
	PON	POWER ON	Power ON	–	–	0	–	–
	POF	POWER OFF	Power OFF	0	0	0	–	–
	PT0	PANEL COLOR TEMP0	Panel color temperature 0 (REFERENCE value)	0	–	–	–	–
	PT1	PANEL COLOR TEMP1	Panel color temperature 1	0	–	–	–	–
	PT2	PANEL COLOR TEMP2	Panel color temperature 2	0	–	–	–	–
	PSN	AUTO POWER OFF OFF POWER MANAGEMENT OFF	Turn the AUTO POWER OFF / POWER MANAGEMENT setting to OFF	0	0	–	–	–
	PS1	AUTO POWER OFF ON	Turn the AUTO POWER OFF setting to ON	0	0	–	–	–
	PS2	POWER MANAGEMENT ON	Turn the POWER MANAGEMENT setting to ON	0	0	–	–	–
	PUN	PURECINEMA OFF	Turn the PURECINEMA to OFF	0	0	–	–	–
	PUS	PURECINEMA STANDARD	Turn the PURECINEMA to STANDARD	0	0	–	–	–
	PUH	PURECINEMA HQ	Turn the PURECINEMA to HQ (HIGH QUALITY)	0	0	–	–	–
	PWN	POWER CONTROL STANDARD	Turn the power control to OFF (STANDARD mode)	0	0	–	–	–
	PWL	CONTROL MODE1	Turn the power control to MODE1 (Power-saving mode)	0	0	–	–	–
	PWS	POWER CONTROL MODE2	Turn the power control to MODE2 (Longevity life mode)	0	0	–	–	–
	PDF	PICTURE DEFAULT	Execute PICTURE DEFAULT	0	–	–	–	–
<b>R</b>	RFY	REFERENCE YES	Start the reference adjustment mode	0	–	–	–	–
<b>S</b>	SCM	COLOR SYSTEM SECAM	Turn the COLOR SYSTEM setting to SECAM	0	0	–	–	–
	STD	STANDARD W/B	Return the PIC and W/B of integrator to factory default value	–	0	–	–	–
	SM0	SCREEN MODE 0	Turn the screen size to DOT BY DOT	0	0	0	–	–
	SM1	SCREEN MODE 1	Turn the screen size to 4:3	0	0	0	–	–
	SM2	SCREEN MODE 2	Turn the screen size to FULL	0	0	0	–	–
	SM3	SCREEN MODE 3	Turn the screen size to ZOOM	0	0	0	–	–
	SM5	SCREEN MODE 5	Turn the screen size to WIDE	0	0	0	–	–
<b>T</b>	SLY	STILL YES	Turn the STILL setting to ON	0	0	0	–	–
	SLN	STILL NO	Turn the STILL setting to OFF	0	0	0	–	–
	TVA	COLOR SYSTEM AUTO	Turn the COLOR SYSTEM setting to AUTO	0	0	–	–	–
<b>V</b>	VFY	VIDEO FULL DISPLAY YES	Start 100% display	–	–	0	–	–
	VFN	VIDEO FULL DISPLAY NO	Complete 100% display	–	–	0	–	–
	VRO	VARIABLE OUTPUT	Turn the audio output to variable	0	0	–	–	–
<b>Y</b>	YCM	3S Y/C MOTION	Turn the 3D Y/C setting to MOTION	0	0	–	–	–
	YCS	3D Y/C STILL	Turn the 3D Y/C setting to STILL	0	0	–	–	–

## 6.4.3 GET Command

### ● Command Description

Command	Function
GAJ	Output data of an electronic VR adjustment value and a drive system adjustment value
GPW	Output data to be related to white balance adjustment of the panel
GS1	Output data such as version information, hour meter and pulse meter
GS2	Output data of power down, temperature and dew drop information
GAS	Output data to be related to picture quality setting of SLOT
GAR	Output data to be related to picture quality (RGB1 of the factory menu)
GPD	Output POWER DOWN information (past eight times)
GPS	Output a SCREEN parameter
GWB	Output a parameter of PICTURE and WHITE BALANCE
GSS	Output various setting of the SET UP item of menu mode / integrator mode
GSO	Output various setting of the OPTION item of menu mode / integrator mode

### GAJ: Output data of an electron VR adjustment value and a drive system adjustment value

- Output it according to transmission order and size of the table below.
- Command is invalid except RS-232C factory adjustment mode.

Order	Data Contents	Size	Remarks
1	Setting mode of electric power upper limit value	3 byte	AB* ( *: 0 to 3)
2	Electric power upper limit value (ABL)	(Reference data)	3 byte
3		(Offset data)	3 byte (Note 1)
4	Vsus adjustment value	(Reference data)	3 byte
5	Vofs adjustment value	(Reference data)	3 byte
6	V-SUS-B adjustment value	(Reference data)	3 byte
7	V-SUS-G adjustment value	(Reference data)	3 byte
8	Y-SUS-B adjustment value	(Reference data)	3 byte
9	Y-SUS-G adjustment value	(Reference data)	3 byte

(Note 1) : When performed in reference mode selection, offset data outputs the same value as the reference data.

### GPW (Get Panel White balance): Output data to be related to white balance adjustment of panel

- Output it according to transmission order and size of the table below.
- Command is invalid except RS-232C factory adjustment mode.

Order	Data Contents	Size	Remarks
1	Panel color temperature mode	3 byte	PT* ( *: 0 to 3)
2	Gain of W/B adjustment value Red	(Reference data)	3 byte
3		(Offset data)	3 byte (Note 1)
4	Gain of W/B adjustment value Green	(Reference data)	3 byte
5		(Offset data)	3 byte (Note 1)
6	Gain of W/B adjustment value Blue	(Reference data)	3 byte
7		(Offset data)	3 byte (Note 1)
8	Offset of W/B adjustment value Red	(Reference data)	3 byte
9		(Offset data)	3 byte (Note 1)
10	Offset of W/B adjustment value Green	(Reference data)	3 byte
11		(Offset data)	3 byte (Note 1)
12	Offset of W/B adjustment value Blue	(Reference data)	3 byte
13		(Offset data)	3 byte (Note 1)

(Note 1) : When performed in reference mode selection, offset data outputs the same value as the reference data.

**GS1: Output data such as version information, hour meter and pulse meter**

- Output it according to transmission order and size of the table below.
- Command is invalid except RS-232C factory adjustment mode.

Order	Data Contents	Size	Remarks
1	Display information	3 byte	See below
2	Module microcomputer model number	4 byte	5691 or F691
3	Module microcomputer version	3 byte	
4	Panel microcomputer version	3 byte	
5	Panel /FLASH ROM version	3 byte	
6	Hour meter (hour)	5 byte	Unit: H (time)
7	Pulse meter	7 byte	Unit: 0.01G (10,000,000)
8	Main microcomputer model number	4 byte	5692
9	Main microcomputer version	3 byte	
10	Wide microcomputer version	3 byte	
11	Wide /FLASH ROM version	3 byte	

**■ Display Information**

Data	Model
MX5	PDP-503CMX (initial value)
MX4	PDP-433CMX / MXE
MD5	Module 50 inches
MD4	Module 43 inches
HD5	PDP-503HD
HD4	PDP-433HD

## GS2: Output data of power down, temperature and dew drop information

- Output it according to transmission order and size of the table below.
- In the PD (Power Down) of RS-232C factory adjustment mode, NG except dew drop and AUDIO occurs and a command that except for 30 seconds to SD (shut down) is invalid.

**Note:** When NG occurred in the PD state, do not perform the "FAY" for 30 seconds to SD (Shut Down), and information acquisition is possible by perform the "GS2" directly. However it is necessary to set ID beforehand.

Order	Data Contents	Size	Remarks
1	AC information	1 byte	Always 0 (not used)
2	Service parts distinction	1 byte	0: DIGITAL ASSY adjustment completion 1: DIGITAL ASSY does not adjust (Service Assy)
3	Hour meter (hour, minute)	7 byte	*****H**M
4	Power down information	2 byte	1st/2nd (Note)
5	Temperature information	3 byte	8 bit
6	Dew drop information	1 byte	1: Dew drop NG
7	Panel microcomputer communication	1 byte	1: Communication NG
8	DIGITAL EEPROM communication	1 byte	1: Communication NG
9	DIGITAL EXPANDER communication	1 byte	1: Communication NG
10	Temperature information (TEMP2)	3 byte	8 bit
11	Temperature information (TEMP3)	3 byte	8 bit
12	Module microcomputer communication	1 byte	1: Communication NG
13	Wide microcomputer communication	1 byte	1: Communication NG
14	MAIN IIC	1 byte	1: Communication NG
15	MAIN EEPROM IIC	1 byte	1: Communication NG
16	AUDIO NG	1 byte	1: AUDIO NG
17	FAN NG	1 byte	1: FAN NG

(Note) Refer to the following table about contents of PD information

Data	Power Down Point
0	Nothing
1	Y-DRIVE
2	Y-DC/DC CONVERTER
3	X-DC/DC CONVERTER
4	X-DRIVE
5	Power supply
6	ADDRESS junction
7	ADDRESS resonance
8	DC/DC CONVERTER (DIGITAL)

**GAS (Get Adjust Slot): Output data to be related to picture quality setting**

- Transmit data according to transmission order and size of the table below.
- Data are SLOT sections of the factory menu.
- When current input function is except for VIDEO input of SLOT system, command is invalid.
- When SLOT is not connected or external SLOT is connected, command is invalid.
- Command is invalid except RS-232C factory adjustment mode.

Order	Data Contents		Size	Remarks
1	Y-DELAY	(Reference data)	3 byte	
2		(Offset data)	3 byte	(Note 1)
3	Y-OUT LEVEL	(Reference data)	3 byte	
4		(Offset data)	3 byte	(Note 1)
5	CD TINT	(Reference data)	3 byte	
6		(Offset data)	3 byte	(Note 1)
7	CDR OFFSET	(Reference data)	3 byte	
8		(Offset data)	3 byte	(Note 1)
9	CDB OFFSET	(Reference data)	3 byte	
10		(Offset data)	3 byte	(Note 1)
11	R-Y LEVEL	(Reference data)	3 byte	
12		(Offset data)	3 byte	(Note 1)
13	B-Y LEVEL	(Reference data)	3 byte	
14		(Offset data)	3 byte	(Note 1)

(Note 1) : When performed in reference mode selection, offset data outputs the same value as the reference data.



## GAR: Output data to be related to picture quality (RGB1 of the factory menu)

- Transmit data according to transmission order and size of the table below.
- Command is invalid except RS-232C factory adjustment mode.

Order	Data Contents	Size	Remarks
1	AD MAIN CONT	(Reference data)	(Note 1)
2		(Offset data)	(Note 1) (Note 2)
3	AD R HIGH	(Reference data)	(Note 1)
4		(Offset data)	(Note 1) (Note 2)
5	AD G HIGH	(Reference data)	(Note 1)
6		(Offset data)	(Note 1) (Note 2)
7	AD B HIGH	(Reference data)	(Note 1)
8		(Offset data)	(Note 1) (Note 2)
9	AD R LOW	(Reference data)	(Note 1)
10		(Offset data)	(Note 1) (Note 2)
11	AD G LOW	(Reference data)	(Note 1)
12		(Offset data)	(Note 1) (Note 2)
13	AD B LOW	(Reference data)	(Note 1)
14		(Offset data)	(Note 1) (Note 2)
15	MAT CONT	(Reference data)	(Note 1)
16		(Offset data)	(Note 1) (Note 2)
17	MAT BRIGHT	(Reference data)	(Note 1)
18		(Offset data)	(Note 1) (Note 2)
19	MAT COLOR	(Reference data)	(Note 1)
20		(Offset data)	(Note 1) (Note 2)
21	MAT TINT	(Reference data)	(Note 1)
22		(Offset data)	(Note 1) (Note 2)

(Note 1) Setting data to be unrelated to current input function / input signal / setting output dummy data.

(Note 2) When performed in reference mode selection, offset data outputs the same value as the reference data.

## GPS: Output data to be related to SCREEN adjustment data

- Transmit data according to transmission order and size of the table below.
- All the data are data of an integrator area.
- Except normal operation mode / each mode of RS-232C integrator adjustment, command is invalid.

Order	Data Contents	Size	Remarks
1	H.POSITION	3 byte	
2	V.POSITION	3 byte	
3	CLOCK	3 byte	(Note 1)
4	PHASE	3 byte	(Note 1)
5	V.SIZE	3 byte	

(Note 1) When current input signal mode is the VIDEO system and INPUT5 (DVI), adjustment data output dummy data (\*).

## GPD (Get Power Down), PD (Power Down) : Outputs information (contents of PD INFORMATION of service factory MENU)

- Output the acquired data according to the transmission order and size of the table below.
  - Except RS-232C factory adjustment mode and PD state, command is invalid.
- (Note)** Do not perform the "FAY" in the PD state, and information acquisition is possible by perform the "GPD" directly.  
However it is necessary to set ID beforehand.

Order	Data Contents	Size	Remarks
1	The latest 1stPD information	1 byte	(Note 1)
2	The latest 2ndPD information	1 byte	(Note 1)
3	Hour meter information of the latest PD	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE
4	1stPD information before twice	1 byte	(Note 1)
5	2ndPD information before twice	1 byte	(Note 1)
6	Hour meter information of PD before twice	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE
7	1stPD information before three times	1 byte	(Note 1)
8	2ndPD information before three times	1 byte	(Note 1)
9	Hour meter information of PD before three times	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE
10	1stPD information before four times	1 byte	(Note 1)
11	2ndPD information before four times	1 byte	(Note 1)
12	Hour meter information of PD before four times	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE
13	1stPD information before five times	1 byte	(Note 1)
14	2ndPD information before five times	1 byte	(Note 1)
15	Hour meter information of PD before five times	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE
16	1stPD information before six times	1 byte	(Note 1)
17	2ndPD information before six times	1 byte	(Note 1)
18	Hour meter information of PD before six times	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE
19	1stPD information before seven times	1 byte	(Note 1)
20	2ndPD information before seven times	1 byte	(Note 1)
21	Hour meter information of PD before seven times	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE
22	1stPD information before eight times	1 byte	(Note 1)
23	2ndPD information before eight times	1 byte	(Note 1)
24	Hour meter information of PD before eight times	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE

(Note 1) Refer to the following table about contents of PD information

Data	Power Down Point
0	Nothing
1	Y-DRIVE
2	Y-DC/DC CONVERTER
3	X-DC/DC CONVERTER
4	X-DRIVE
5	Power supply
6	ADDRESS junction
7	ADDRESS resonance
8	DC/DC CONVERTER (DIGITAL)

## GWB (Get White Balance): Output data to be related to picture quality / white balance

- Transmit data according to transmission order and size of the table below.
- Except each normal operation mode / RS-232C integrator adjustment / RS-232C factory adjustment mode, command is invalid.
- In the normal operation / RS-232C integrator adjustment mode, output two data of the current signal mode in the current input function and integrator area of current color mode.
- In the RS-232C factory adjustment mode, output data of factory RGB2.

Order	Data Contents	Size	Remarks
1	CONTRAST	3 byte	
2		3 byte	(Note 2)
3	BRIGHT	3 byte	
4		3 byte	(Note 2)
5	COLOR	3 byte	(Note 1)
6		3 byte	(Note 2)
7	TINT	3 byte	(Note 1)
8		3 byte	(Note 2)
9	R HIGH	3 byte	
10		3 byte	(Note 2)
11	G HIGH	3 byte	
12		3 byte	(Note 2)
13	B HIGH	3 byte	
14		3 byte	(Note 2)
15	R LOW	3 byte	
16		3 byte	(Note 2)
17	G LOW	3 byte	
18		3 byte	(Note 2)
19	B LOW	3 byte	
20		3 byte	(Note 2)
21	H.ENHANCE (H.SHARP)	3 byte	
22	V.ENHANCE (V.SHARP)	3 byte	

(Note 1) Setting data to be unrelated to current input function / input signal / setting output dummy data (\*).

(Note 2) When performed in reference mode selection, offset data outputs the same value as the reference data.

**GSS: Output data to be related to various established state  
(SET UP item of menu mode / integrator menu)**

- Transmit data according to transmission order and size of the table below.
- Except each normal operation mode / RS-232C integrator adjustment / RS-232C factory adjustment mode, command is invalid.

Order	Data Contents	Size	Output	Remarks
1	COLOR TEMP	1 byte	1: COLOR TEMP1 2: COLOR TEMP2 3: COLOR TEMP3 4: COLOR TEMP4 5: COLOR TEMP5	(Note 1)
2	DIGITAL NR	1 byte	0: OFF 1: LOW 2: MIDDLE 3: HIGH	(Note 1)
3	HIGH CONTRAST	1 byte	0: OFF, 1: ON	
4	PURECINEMA	3 byte	Same as the RS-232C command	(Note 1)
5	COLOR SYSTEM	3 byte	Same as the RS-232C command	(Note 1)
6	CLAMP	1 byte	1: AUTO 2: LOCKED	(Note 1)
7	3DY/C	1 byte	M: MOTION S: STILL	(Note 1)
8	SETTING/VIDEO SIGNAL	3 byte	Same as the RS-232C command	(Note 1)
9	2X2MODE	1 byte	0: OFF 1 to 4: MG1 to MG4 (Refer to item MAGNIFY)	
10	BRIGHT ENHANCE	1 byte	0: OFF, 1: ON	
11	HDTV MODE	3 byte	Same as the RS-232C command	(Note 1)
12	VIDEO INPUT	1 byte	1: COMPONENT1 2: COMPONENT2	(Note 1)
13	Input function	3 byte	IN*	
14	Screen size	1 byte	0: DOT BY DOT 1: 4:3 (TYPE) 2: FULL (TYPE) 3: ZOOM 5: WIDE 6: 100% display	
15	SUB VOLUME (INPUT1)	2 byte	0 to 60	
16	SUB VOLUME (INPUT2)	2 byte	0 to 60	
17	SUB VOLUME (INPUT3)	2 byte	0 to 60	(Note 1)
18	SUB VOLUME (INPUT4)	2 byte	0 to 60	(Note 1)
19	SUB VOLUME (INPUT5)	2 byte	0 to 60	(Note 1)

(Note 1) Setting data to be unrelated to current input function / input signal / setting output dummy data (\*).

## GSO: Output data to be related to various established state (OPTION item of menu mode / integrator menu)

- Transmit data according to transmission order and size of the table below.
- Except each normal operation mode / RS-232C integrator adjustment / RS-232C factory adjustment mode, command is invalid.

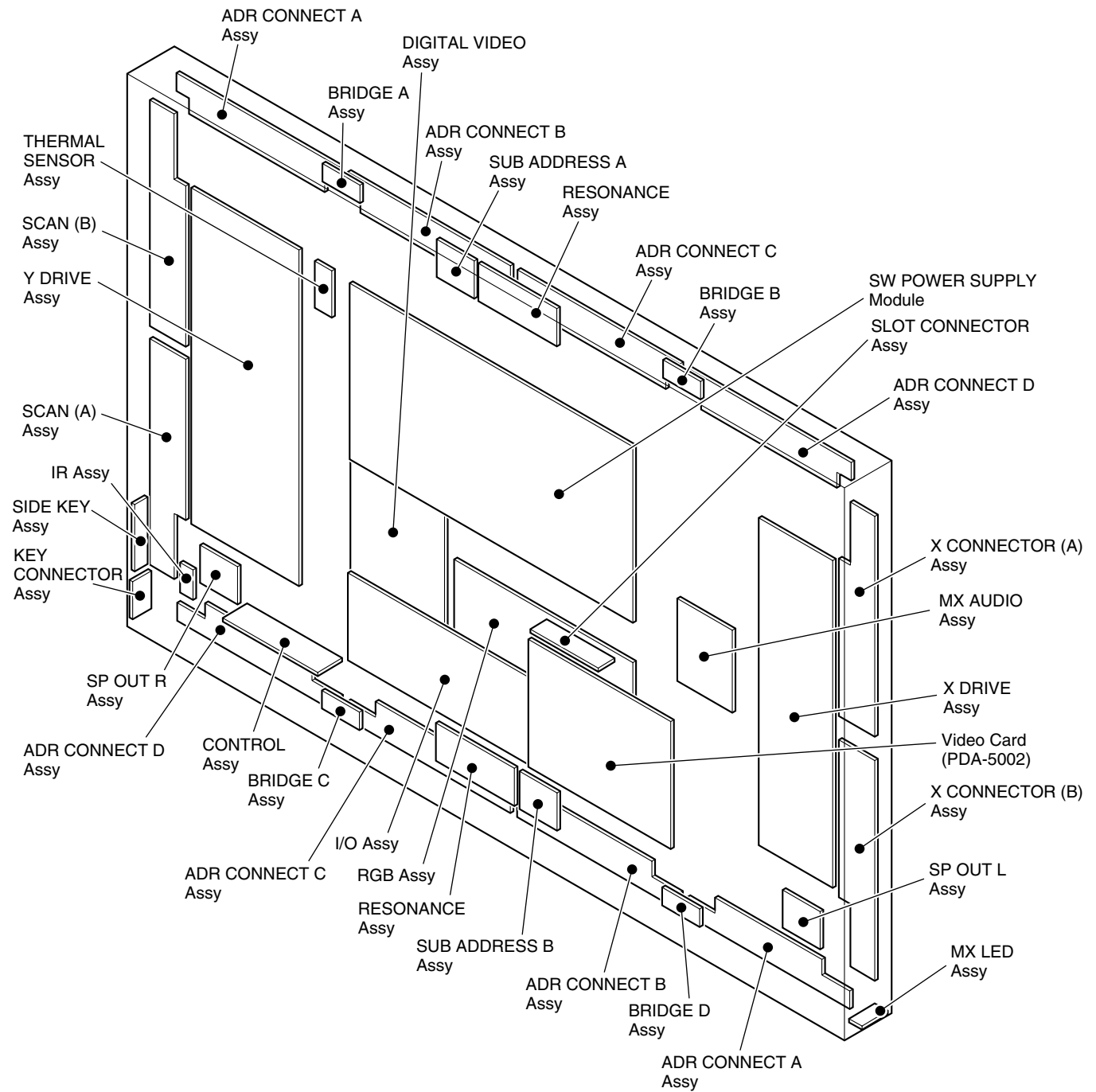
Order	Data Contents	Size	Output	Remarks
1	POWER CONTROL	3 byte	Same as the RS-232C command	
2	OSD display	1 byte	0: OSD display prohibition 1: OSD display permission	
3	FULL MASK	3 byte		Display a RS-232C command of set MASK currently
4	R SIDE MASK LEVEL	3 byte	Adjustment value	
5	G SIDE MASK LEVEL	3 byte	Adjustment value	
6	B SIDE MASK LEVEL	3 byte	Adjustment value	
7	MASK CONTROL	1 byte	0: OFF, 1: ON	
8	ORBITER MODE	1 byte	0: OFF, 1: ON	
9	INVERSE MODE	1 byte	0: OFF, 1: ON	
10	COLOR MODE	1 byte	1: COLOR MODE1 2: COLOR MODE2	
11	MIRROR MODE	1 byte	X: Right and left inverting Y: Top and bottom inverting Z: Top and bottom right and left inverting N: OFF	
12	FAN CONTROL	1 byte	A: AUTO M: MAX	
13	MONITOR NAME	12 byte		
14	SLOT INPUT	1 byte	0: VIDEO (RGB) 1: COMPONENT1 2: COMPONENT2	(Note 1)
15	TEMPERATURE	3 byte	A/D input value	TEMP3
16	HOURLY METER	5 byte		Unit : H
17	KEY LOCK	1 byte	0: Lock release 1: Lock	

(Note 1) Output dummy data (\*) in inside SLOT connection.

## 7. GENERAL INFORMATION

### 7.1 DIAGNOSIS

#### 7.1.1 PCB LOCATION



● Rear View

## 7.1.2 SHUT DOWN/POWER DOWN DIAGNOSIS BY LED DISPLAY

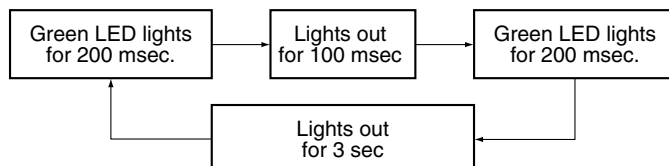
When internal circuit abnormality and other operation abnormality occurred from this unit, self-diagnose display function by STANDBY/ON (LED) indicator is loaded.

Each NG point by LED blinking and a PD (power down) point are as follows.

### ● Shut Down

- Operations : When a microcomputer detected abnormality, turn the power supply to OFF.
- LED display : Green blinks

Examples: LED blinks in the DIGITAL-IIC communication NG



Number of blinks	Name
1	Panel Microcomputer NG
2	DIGITAL-IIC communication NG
3	Dewdrop abnormality
4	Temperature abnormality
5	FAN abnormality
6	Module microcomputer NG
7	Wide microcomputerNG
8	RGB-IIC communication NG
9	Audio NG

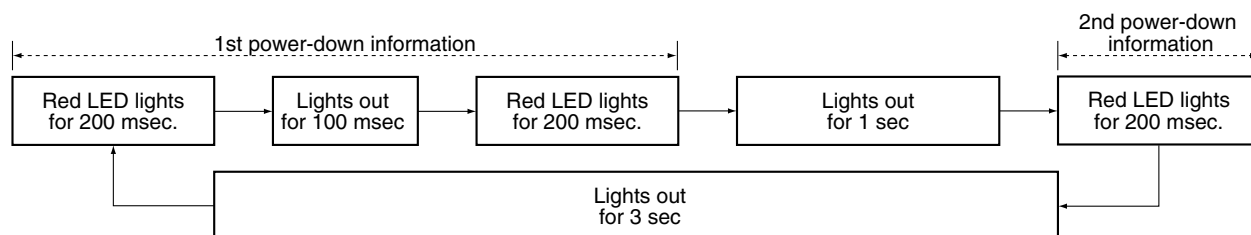
#### How to release the shut down state

When turn the power supply ON by remote control units, release from the shut down state, and turn the power supply ON.  
(It is not necessary to turn the AC power OFF.)

### ● Power Down

- Operations : When this unit becomes the dangerous state, turn the power supply OFF with the protection circuit.
- LED display : Red blinks
- \* When protection circuit more than two places almost worked simultaneously, display LED in order to 1st - 2nd.

Examples: LED blinks in the 1st power down = Y-DC/DC CONVERTER, 2nd power down = Y-DRIVE



Number of blinks	Name
1	Y-DRIVE
2	Y-DC/DC CONVERTER
3	X-DC/DC CONVERTER
4	X-DRIVE
5	Power supply
6	Address junction
7	Address resonance
8	DIGITAL-DC/DC CONVERTER

#### How to release the power down state

AC power OFF



Wait for PD LED in the power supply module disappearing (for around 30 seconds).



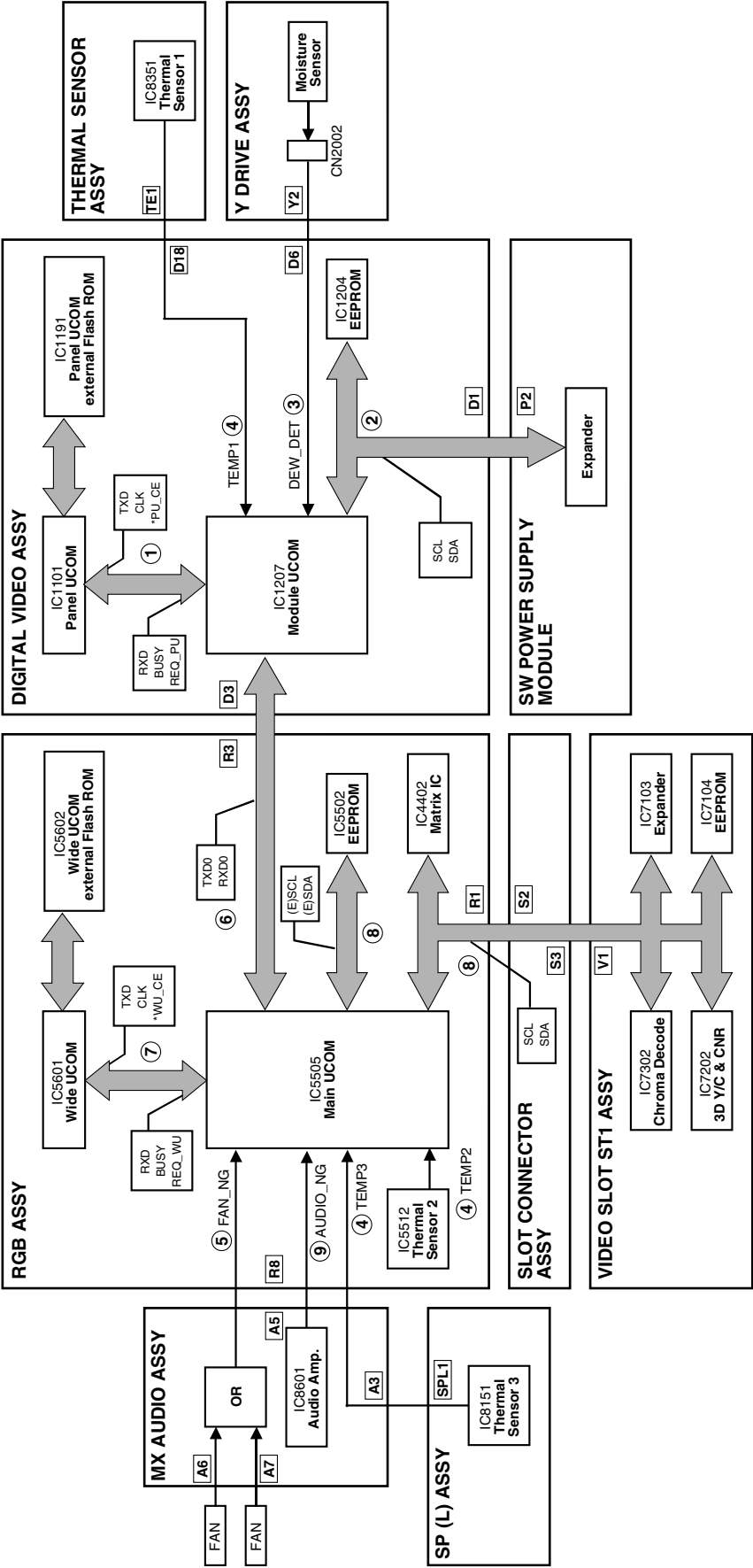
Afterwards, wait moreover for five seconds.



Return by AC power ON.

\* After power down release, this unit rises up in the standby state.

● Block Diagram of Shut Down Signal System



Note: ① - ⑧ show LED flashing number of times when shut down occurred in this route.

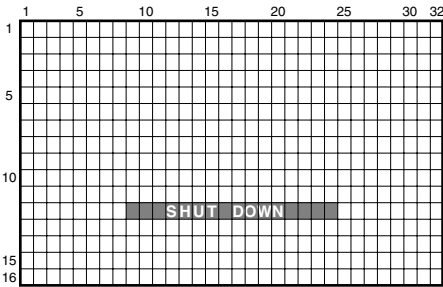


● Shut down diagnosis

① Panel microcomputer NG

When a module microcomputer failed in communication with a panel microcomputer, this NG occurs.  
Shut down after OSD display for 30 seconds from the NG detection.

**Abnormality to expect**  
Open / Short of communication line in the Assy

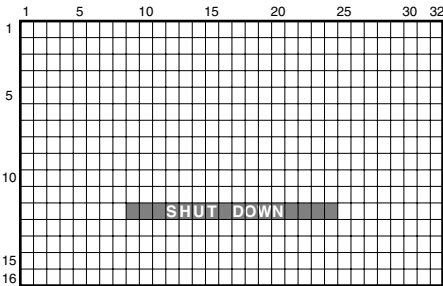


② DIGITAL-IIC communication NG

When a module microcomputer failed in communication with outside EEPROM or EXPANDER, this NG occurs.  
Shut down after OSD display for 30 seconds from the NG detection.  
\* However, this communication NG may occur in the standby state.

**Abnormality to expect**

- Open / Short of communication line in the Assy
- Breaking of wire between DIGITAL VIDEO Assy (D1) and SW POWER SUPPLY Module (P2).



③ Dew drop detection

When it becomes the dew drop state in this unit, this NG occurs.  
After the dew drop detection, shut down immediately.

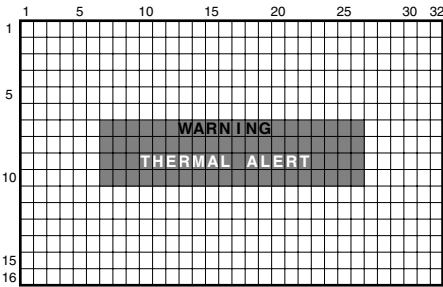
**Abnormality to expect for dew drop**  
Disconnect a connector CN2002 between Dew drop sensor and Y DRIVE Assy.

④ Temperature abnormality

When temperature of this unit became abnormally high, this NG occurs.  
Shut down after OSD display from the NG detection for 30 seconds.

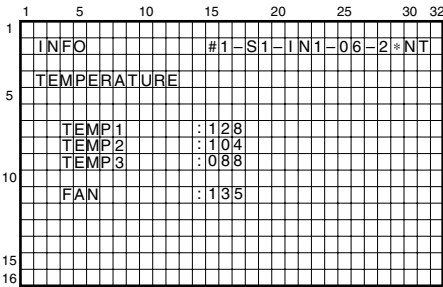
**Abnormality to expect when it occurs in the environment that is not high-temperature**

- Disconnect a connector between SP TERMINAL (L) Assy (SPL1) and MX AUDIO Assy (A3).
- Disconnect a connector between MX AUDIO Assy (A5) and RGB Assy (R8).
- Disconnect a connector between DIGITAL VIDEO Assy (D18) and temperature sensor 1 (TE1).



Reference

Shut down temperature of each temperature sensor  
TEMP2 data  $\geq 150$  ( $\approx 80^{\circ}\text{C}$ )  
TEMP3 data  $\geq 117$  ( $\approx 64^{\circ}\text{C}$ )  
\* TEMP1 is not shut down by temperature, and it shuts down when connector was disconnected.  
  
Temperature display by "INFORMATION" of the factory menu  
TEMP1 ( $^{\circ}\text{C}$ )  $\approx$  TEMP1 (data) -50  
TEMP2 ( $^{\circ}\text{C}$ )  $\approx$  TEMP2 (data) /2+5  
TEMP3 ( $^{\circ}\text{C}$ )  $\approx$  TEMP3 (data) /2+5



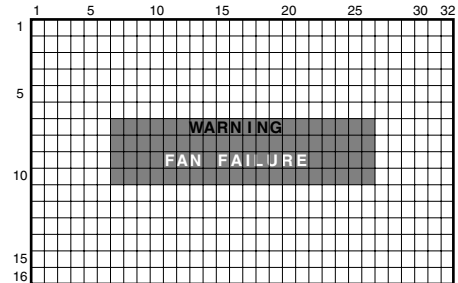
## ⑤ FAN NG

When a fan does not function, this NG occurs.  
Shut down after OSD display for 30 seconds from the NG detection.

- \* FAN NG detection functions only in case of following.
  - When FAN CONTROL setting is maximum
  - When sensor temperature of TEMP3 is more than 30°C with FAN CONTROL setting is AUTO.  
(even if connector is left when does not turn the FAN, this unit does not work.)

### Abnormality to expect

- Disconnect a junction connector between FAN (A6) and MX AUDIO Assy (A7).
- Disconnect a connector between MX AUDIO Assy (A5) and RGB Assy (R8).
- FAN forced stop by an alien substance involving it.

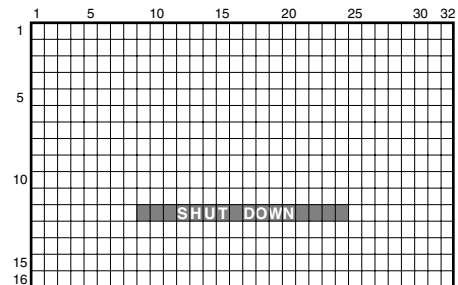


## ⑥ Module microcomputer NG

When a main microcomputer failed in communication with a module microcomputer, this NG occurs.  
Shut down after OSD display for 30 seconds from the NG detection.  
\* However, this communication NG may occur by the standby state.

### Abnormality to expect

- Open / Short of communication line in the Assy.
- Disconnect a connector between RGB Assy (R3) and DIGITAL VIDEO Assy (D3).
- Writing defectiveness of module microcomputer (IC1207) software.

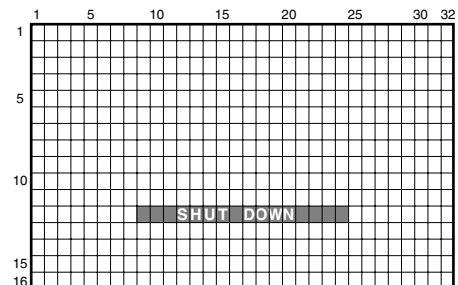


## ⑦ Wide microcomputer NG

When a main microcomputer failed in communication with a wide microcomputer, this NG occurs.  
Shut down after OSD display for 30 seconds from the NG detection.

### Abnormality to expect

- Open / Short of communication line in the Assy.
- Software writing defectiveness of wide microcomputer (IC5601).
- Writing defectiveness of outside Flash ROM (IC5602) on the wide microcomputer.



## ⑧ RGB-IIC communication NG

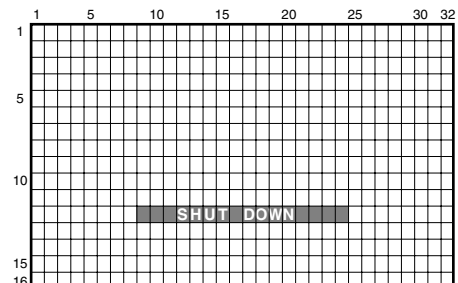
When a main microcomputer failed in IIC communication, this NG occurs.  
Shut down after OSD display for 30 seconds from the NG detection.  
\* However, this communication NG may occur by the standby state.

### Abnormality to expect

- Open / Short of communication line in the Assy.
- SLOT and the insertion of the SLOT junction PC Board are incomplete.

**Notes:** There is the case that it becomes the following symptom except NG when the SLOT insertion is incomplete.

- Audio of INPUT3 and 4 are not output.
- Do not switch from INPUT3 to 5 (SLOT function).
- Video signal of INPUT1 and 2 are not appear.



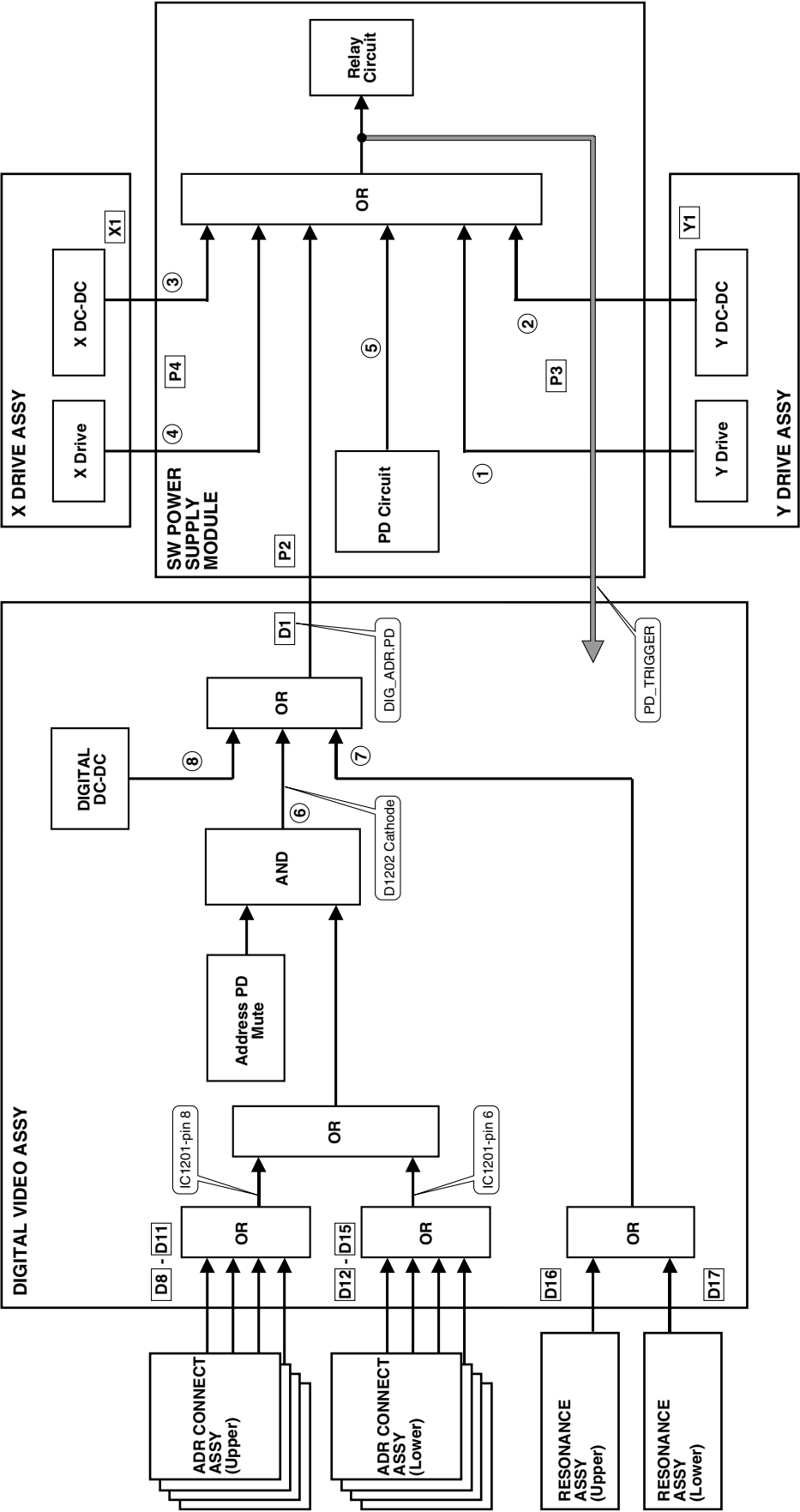
## ⑨ Audio NG

When DC component added on the speaker output line, this NG occurs.  
After the NG detection, shut down immediately.

### Abnormality to expect

- Disconnect a connector between MX AUDIO Assy (A5) and RGB Assy (R8).
- Short-circuits between + and - of C8615 and C8622.

● Block Diagram of Power Down Signal System



Note: ① - ⑧ show LED flashing number of times when power down occurred in this route.

● Kind and function of the various protection circuit (P.D. circuit)

Assy Name	OSD Display	Red LED Number of Blinks	Kind of P.D. Circuit	Function	Remarks
Y DRIVE Assy	Y-DRV	1	VCP OCP	P.D. by VCP overcurrent	
	Y-DDC	2	VOFS OVP	P.D. by VOFS overvoltage	
			VOFS UVP	P.D. by VOFS undervoltage (= overcurrent)	
			VH OVP	P.D. by VH overvoltage	
			VH UVP	P.D. by VH undervoltage (= overcurrent)	
			IC5V UVP	P.D. by IC5V undervoltage (= overcurrent)	
X DRIVE Assy	X-DDC	3	VRN OVP	P.D. by VRN overvoltage	
			VRN UVP	P.D. by VRN undervoltage (= overcurrent)	
	X-DRV	4	VCP OCP	P.D. by VCP overcurrent	
			RESET OCP	P.D. by reset circuit overcurrent	
SW POWER SUPPLY Module	POWER	5	VSUS OVP	P.D. by VSUS overvoltage	
			VSUS UVP	P.D. by VSUS undervoltage (= overcurrent)	
			VADR OVP	P.D. by VADR overvoltage	
			VADR UVP	P.D. by VADR undervoltage (= overcurrent)	
			15V OVP	P.D. by 15V overvoltage	
			15V UVP	P.D. by 15V undervoltage (= overcurrent)	
			12V UVP	P.D. by 12V undervoltage (= overcurrent)	
			6.5V OVP	P.D. by 6.5V overvoltage	
			6.5V UVP	P.D. by 6.5V undervoltage (= overcurrent)	
			13.5V UVP	P.D. by 13.5V undervoltage (= overcurrent)	
			-9V UVP	P.D. by -9V undervoltage (= overcurrent)	
			+B OVP	P.D. by +B overvoltage	
			+B OCP	P.D. by +B overcurrent	
			AC200V P.D.	P.D. by AC200V apply	Note 1
				PFC module overheat protection	
				VSUS arc resistance overheat protection	
ADR CONNECT Assy	ADRES	6	ADR.PD	P.D. by disconnecting the connector	
RESONANCE Assy	ADR-K	7	ADR.K.PD	P.D. by ICP open and TCP defective	
DIGITAL VIDEO Assy	DC-DC	8	5.0V OVP	P.D. by 5V overvoltage	
			5.0V UVP	P.D. by 5V undervoltage (= overcurrent)	
			3.3V OVP	P.D. by 3.3V overvoltage	
			3.3V UVP	P.D. by 3.3V undervoltage (= overcurrent)	
			2.5V OVP	P.D. by 2.5V overvoltage	
			2.5V UVP	P.D. by 2.5V undervoltage (= overcurrent)	

**Reference**

OVP : **O**ver **V**oltage **P**rotect  
 UVP : **U**nder **V**oltage **P**rotect  
 OCP : **O**ver **C**urrent **P**rotect

**Note 1:** AC200V P.D. is not applicable to the PDP-433MXE model.

# PDP-433CMX, PDP-433MXE

## ● Diagnosis Method in Power Down

1st/2nd/time stamp are stored eight times of power down in the past.

### ① OSD display of PD history

Display with "INFORMATION" of the factory menu.

1	5	10	15	20	25	30	32
1	INFO						
				#1-S1-I	N4-02-2	*NT	
5	PD	INFO					
		1ST		2ND			
	1	X-DDC			05148H25M		
	2	ADR-K	X-DDC		02248H14M		
	3	Y-DRV	DC-DC		01358H36M		
10	4	ADRES			00348H15M		
	5				00000H00M		
	6				00000H00M		
	7				00000H00M		
15	8				00000H00M		
16							

### Display of PD point

Power Down Point	OSD Display
Y-DRIVE	Y-DRV
Y-DC/DC CONVERTER	Y-DDC
X-DC/DC CONVERTER	X-DDC
X-DRIVE	X-DRV
Power supply	POWER
ADDRESS junction	ADRES
ADDRESS resonance	ADR-K
DC/DC CONVERTER (DIGITAL)	DC-DC

Time stamp display

[OOOOOH] : HOUR, [OOM] : MINUTE

Example)

Time stamp display is [65432H10M] → 65432 hours 10 minutes pass since the time of product shipment.

### ② PD history read in by RS-232C command "GPD"

Order	Data contents	Size
1	The latest 1st PD point	1 byte
2	The latest 2nd PD point	1 byte
3	The latest PD time stamp	7 byte
4	1st PD point before twice	1 byte
5	2nd PD point before twice	1 byte
6	PD time stamp before twice	7 byte
7	1st PD point before three times	1 byte
8	2nd PD point before three times	1 byte
9	PD time stamp before three times	7 byte
10	1st PD point before four times	1 byte
11	2nd PD point before four times	1 byte
12	PD time stamp before four times	7 byte
13	1st PD point before five times	1 byte
14	2nd PD point before five times	1 byte
15	PD time stamp before five times	7 byte
16	1st PD point before six times	1 byte
17	2nd PD point before six times	1 byte
18	PD time stamp before six times	7 byte
19	1st PD point before seven times	1 byte
20	2nd PD point before seven times	1 byte
21	PD time stamp before seven times	7 byte
22	1st PD point before eight times	1 byte
23	2nd PD point before eight times	1 byte
24	PD time stamp before eight times	7 byte

### Data of PD point

Power Down Point	"GPD" Data
Y-DRIVE	1
Y-DC/DC CONVERTER	2
X-DC/DC CONVERTER	3
X-DRIVE	4
Power supply	5
ADDRESS junction	6
ADDRESS resonance	7
DC/DC CONVERTER (DIGITAL)	8

Time stamp data

before 5 byte: HOUR, after 2 byte: MINUTE

Example)

Time stamp is [6543210] → 65432 hours 10 minutes pass since the time of product shipment.

● Diagnosis of the error point in the various protection circuit (P.D. circuit) operation (Red LED blinks)

Number of Blinks	P.D. Point in Operation	Error Pont	Possible Part of Error	Circuit State	Operation P.D. Circuit	Diagnosis Condition
1	Y DRIVE	Y DRIVE Assy	IC2206, IC2214 (Pulse module), IC2203, IC2204, IC2212, IC2213, IC2213, IC2217, R2209	K2211 Lo	VCP OCP	
		VOFS D/D CONV. BLOCK (Y DRIVE Assy)	IC2702, IC2709, IC2715	K2712 Lo	VOFS OVP	
		VOFS D/D CONV. BLOCK (Y DRIVE Assy)	IC2701, IC2702, IC2709, IC2715	K2709 Lo	VOFS UVP	Drive section (control signal, output elements etc.) in normal operation
		VH D/D CONV. BLOCK (Y DRIVE Assy)	Q2211, Q2212, R2277, IC2208, IC2210	K2719 Lo	VH OVP	VOFS D/D CONV. BLOCK in normal operation
2	Y DC DC	VH D/D CONV. BLOCK (Y DRIVE Assy)	IC2712, IC2716			Drive section (control signal, output elements etc.) in normal operation
		SCAN (A), (B) Assy	IC2711, IC2712, IC2716	K2718 Lo	VH UVP	VH D/D CONV. BLOCK in normal operation
		IC5V D/D CONV. BLOCK (Y DRIVE Assy)	SCAN IC			SCAN Assy in normal operation
		SCAN (A), (B) Assy	IC2704, IC2706, IC2717	K2713 Lo	IC5V UVP	IC5V D/D CONV. BLOCK in normal operation
		IC5V D/D CONV. BLOCK (Y DRIVE Assy)	SCAN IC			SCAN Assy in normal operation
3	X DC DC	VRN D/D CONV. BLOCK (X DRIVE Assy)	IC2704, IC2706, IC2717	K3708 Lo	VRN OVP	
		VRN D/D CONV. BLOCK (X DRIVE Assy)	IC3702, IC3712			Drive section (control signal, output elements etc.) in normal operation
		VRN D/D CONV. BLOCK (X DRIVE Assy)	IC3701, IC3702, IC3712	K3705 Lo	VRN UVP	VRN D/D CONV. BLOCK in normal operation
		X DRIVE Assy	Q3122			
4	X DRIVE	X DRIVE Assy	IC3200, IC3201 (pulse module), IC3103, IC3104, IC3106, IC3107, IC3110, IC3113, R3109	K3103 Lo	VCP OCP	
		X DRIVE Assy	Q3122	K3102 Lo	VRN OCP	
		X DRIVE Assy	IC3200, IC3201 (Pulse module)			When P4 connector disconnected, P.D. does not occur
		Y DRIVE Assy	IC2206, IC2214 (Pulse module)			When P3 connector disconnected, P.D. does not occur
5	PS	MX AUDIO Assy	IC8601 (Audio IC)			When P6 connector disconnected, P.D. does not occur
		ADDRESS CONNECT A - D Assy, RESONANCE Assy, D/D CONV. BLOCK (DIGITAL VIDEO Assy)				When pin 5 of P2 connector disconnected, P.D. does not occur
		SW POWER SUPPLY Module	SW POWER SUPPLY Module			When the voltage is not output even if P4, P3 and P6 connectors disconnected
6	ADR	ADDRESS CONNECT A-D Assy	Disconnect D8 - D15 connectors		ADR. PD	
7	ADR K	RESONANCE Assy	TCP damage of IC6704 (ICP), disconnect D16 and D17 connectors, panel microcomputer is defective, outside Flash ROM of the panel microcomputer is defective.		ADR. K. PD	
8	DIGITAL DC DC	D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1901 Lo	5.0V OVP	
		D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1902 Lo	5.0V UVP	
		D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1903 Lo	3.3V OVP	
		D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1904 Lo	3.3V UVP	
		D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1905 Lo	2.5V OVP	
		D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1906 Lo	2.5V UVP	

**Note: About PS PD**

The condition that Red LED blinks five times (power supply PD)

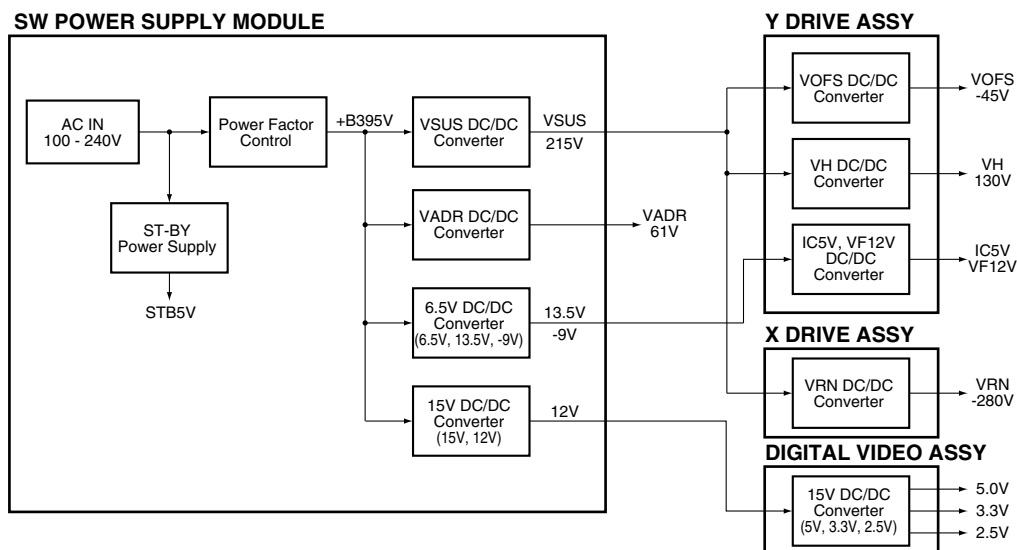
1 When the internal protection circuit of SW POWER SUPPLY Module worked

2 When a microcomputer was not able to identify the PD point

↓

Being careful because the protection circuit of SW POWER SUPPLY Module cannot conclude that worked.

## ● Block diagram for Power supply section



## ● Supplementary information

### 1. Power on/off switch for the large-signal system (SW102)

**Function:** Only the power for the small-signal system (15V, 12V, 6.5V, 13.5V, and -9V) is on, and the power for the large-signal system (VSUS, VADR) is off.

**Usage:** Use when only an operational check for the small-signal system is required.

**Supplementary information:**

When this switch is to be used, the wires of pin 5 (DIG, ADR, and PD) of the P2 connector of the power-supply module should be disconnected to prevent the PD circuit from operating. To turn the power of the large-signal system off without using this switch, operation from an external PC through RS-232C commands "DRF" is basically required. In this case, the above procedure is not required, as the PD circuit is muted by software.

#### Method of power supply ON in the large signal system OFF state with RS-232C command

- ① Confirm that this unit is the standby state.
  - ② Transmit RS-232C command "DRF."
  - ③ Turn the power supply ON by remote control unit, side key or command "PON."
- \* When turn the power supply OFF once, return to setting of large signal system ON.  
When turn the power supply ON in the large signal system OFF, transmit "DRF" command each time.

### 2. 200V AC power-down switch (SW101)

**Function:** While 200V AC voltage is applied, operation of the PD circuit is turned on and off (ON when the switch is set to 100V AC, and OFF when the switch is set to 200V AC).

**Setting:** For the MXE model only, the switch is set to 200V, and for other models, it is set to 100V.

### 3. Temperature compensation of the VSUS voltage for the drive system

**Function:** Control the power supply voltage mentioned above according to temperature. (Temperature compensation works so that the voltage is lowered on the lower-temperature side, and is raised on the higher-temperature side.)

**Purpose:** To improve the yield by compensating the temperature characteristics of the panel.

**Supplementary information:**

For this model, temperature compensation is performed only for the VSUS voltage, and not for the VOFS voltage, and it is controlled by software.

### 4. When a fuse blows

- If a fuse blows, never turn the power on again only after replacing the fuse. (In most cases, the fuse itself did not have any problem. So as long as factors of overcurrent have not been removed, chances of destruction increase every time the power is turned on. In the worst case, about a dozen parts may be destroyed.)
- Principally, the whole power-supply module must be replaced.

### 5. Voltage adjustment of the panel drive

As this model employs the electronic VR system for the VSUS and VOFS voltages, and as the voltage-adjustment data are stored in the DIGITAL assembly, voltage adjustment of the panel drive is not necessary when the power-supply modules are changed. (For VADR, VH, and VRN, adjustments with semifixed VR controls are necessary.)

For this model, as the power-supply block has been developed and designed by an outside vendor, at the point you know which module is a cause of failure (through diagnosis described elsewhere in this manual), change the corresponding modules, and do not diagnose or repair the module.

Similarly, the switches and the semifixed VRs inside the power-supply module must not be adjusted without a special reason.

7.1.3 AUTOMATIC BACKUP OF DIGITAL VIDEO ASSY DATA

■ Description

Auto copies data of EEPROM (IC1204/2k bit) on the DIGITAL VIDEO Assy as data for backup in the Assy replacement to one part of EEPROM (IC5502/64k bit) of the RGB Assy (area A of figure below).  
Therefore DIGITAL VIDEO Assy or main unit adjustment item in the RGB Assy replacement (data of EEPROM on DIGITAL VIDEO Assy) is succeeded to Assy after replacement.

Note : COLOR and TINT are main unit adjustment items, but does not automatic backup because there are data in area C  
(refer to figure below).

● Contents of EEPROM on the DIGITAL VIDEO Assy

- Adjustment value of PANEL White Barance
  - PANEL-R HIGH : Main unit adjustment item
  - PANEL-G HIGH : Main unit adjustment item
  - PANEL-B HIGH : Main unit adjustment item
  - PANEL-R LOW : Main unit adjustment item
  - PANEL-G LOW : Main unit adjustment item
  - PANEL-B LOW : Main unit adjustment item

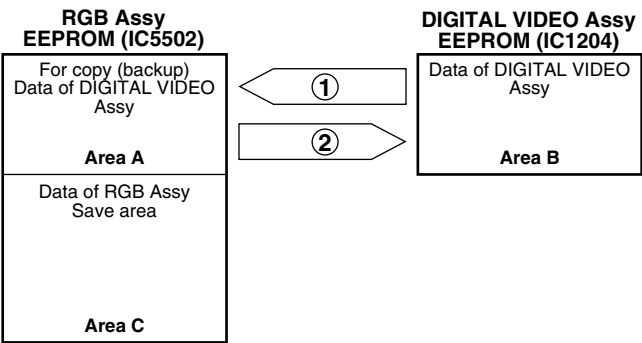
Perform automatic data backup
- Adjustment value of ABL
  - ABL LEVEL : Main unit adjustment item

Perform automatic data backup
- Adjustment value of drive system
  - X-SUS-B : Main unit adjustment item
  - X-SUS-G : Main unit adjustment item
  - Y-SUS-B : Main unit adjustment item
  - Y-SUS-G : Main unit adjustment item
  - V-SUS : Main unit adjustment item
  - V-OFFSET : Main unit adjustment item

Perform automatic data backup
- Pulse meter
- Hour meter
- Setting data of various FULL MASK

■ Flow of basic automatic backup

Use a key word, and judge each data (area A and B) whether it is the adjusted data or the not adjusted data, and perform the copy operation.



- ① Perform the copy whenever enter the service factory mode. (There is not relation in a key word.)
- ② In the power supply ON, confirm a key word, and perform the copy when a key word of DIGITAL VIDEO Assy (area B) does not adjust and a key word of RGB Assy is adjustment complete.

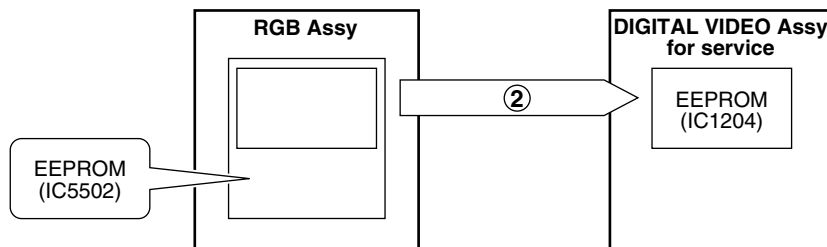


## ■ Actual automatic backup operation

### 1. In the DIGITAL VIDEO Assy replacement (Use the service Assy)

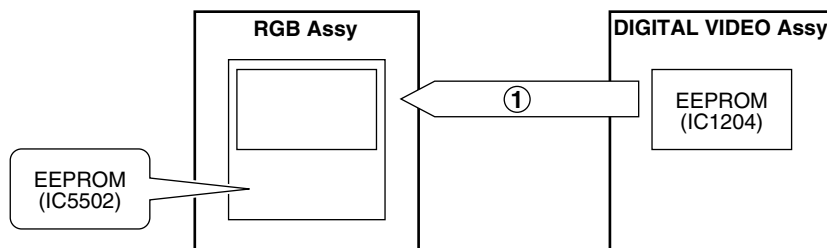
Do not need modification of key words.

Replace DIGITAL VIDEO Assy with DIGITAL VIDEO Assy for service, and auto copies the backup data from EEPROM of RGB Assy to EEPROM of DIGITAL VIDEO Assy by turning the power on.



### 2. In the RGB Assy replacement (Do not need to be service Assy.)

Replace RGB Assy, and auto copy from EEPROM of DIGITAL VIDEO Assy to EEPROM of RGB Assy as for backup by enter the service factory mode.



### 3. In the DIGITAL VIDEO Assy replacement (Recycling of a repair part)... When install DIGITAL VIDEO Assy after repair to other sets.

Set a key word of DIGITAL VIDEO Assy to recycle in "Do not adjust".

Enter the service factory mode before removing the DIGITAL VIDEO Assy to recycle, and execute SERVICE PARTS of item INITIALIZE. (However, limit it when work as the main unit and OSD display is possible.)

Readjustment is necessary when cannot execute SERVICE PARTS.

**Note:** When does not change key word and repairs the DIGITAL VIDEO Assy and installed the DIGITAL VIDEO Assy after repair in another set 2, this function does not work in normal.

In addition, when have entered the service factory mode in the state mentioned above, copy data in the DIGITAL VIDEO Assy of set 1 before repair to area A in the RGB Assy of set 2 to install after repair.

Therefore necessary data have been performed overwrite with set 2.

Cannot replace the data which performed overwriting once.

### 4. In the DIGITAL VIDEO Assy replacement (Recycling of a repair part)... When install the DIGITAL VIDEO Assy after repair to the former set

Do not need modification of key words.

After repair the DIGITAL VIDEO Assy, work with the main unit adjustment value as before by installing it to the former set.

Perform the same operation as item 1 afterward.

### 5. When replace the DIGITAL VIDEO Assy and the RGB Assy to another Assy simultaneously

Normal copy with this function does not work. Readjustment is necessary.

## ■ Others

### 1. COLOR and TINT are main unit adjustment items, but does not automatic backup because there are data in area C.

About these two items

#### ① When replaced only the DIGITAL VIDEO Assy

Readjustment is unnecessary so that data is stored in the RGB Assy.

#### ② When replaced the RGB Assy

Readjustment is necessary after repair.

### 2. Data in EEPROM of the RGB Assy (area C) are Assy adjustment items except COLOR and TINT.

Do not need a readjustment when replaced the Service Assy.

7.1.4 DISASSEMBLY

SW Power Supply Module

① Remove the Rear Case (M). (Screws × 20)

② Remove four screws.

③ Remove the SW Power Supply Module.

↓

④ Insert the SW Power Supply Module into the slit of Sub Frame L and R.

Sub Frame L

Sub Frame R

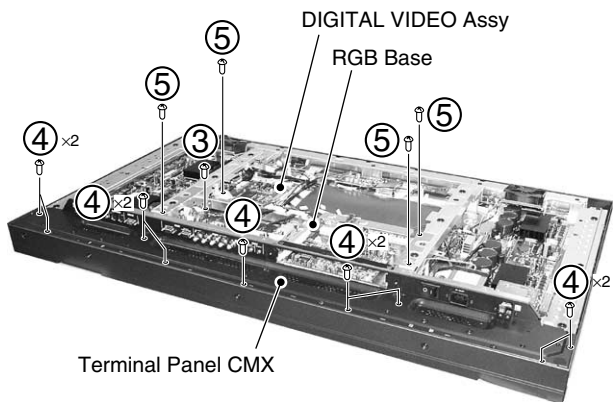
SW Power Supply Module

↓

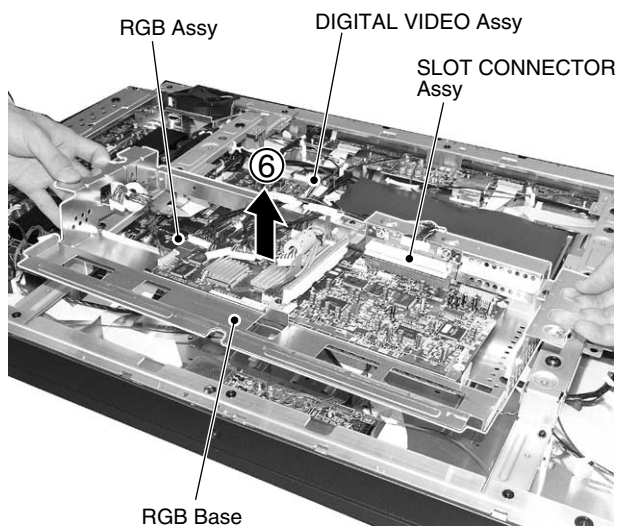
Diagnosis

## DIGITAL VIDEO Assy

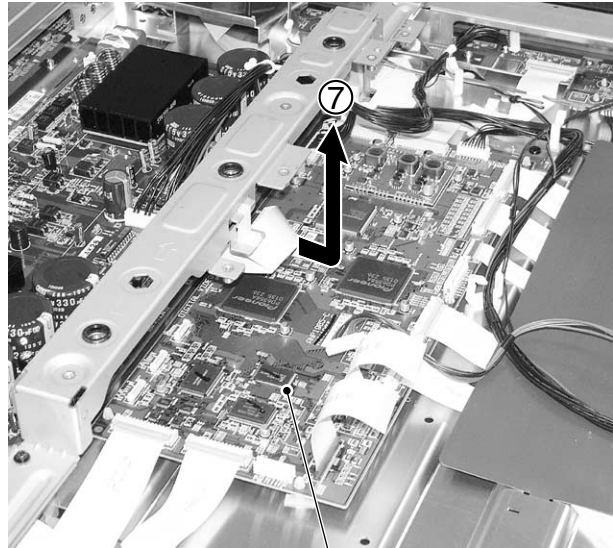
- ① Remove the Rear Case (M). (Screws × 20)
- ② Remove the SW Power Supply Module.  
(Connector, Screws × 4)
- ③ Remove a screw of earth block.
- ④ Remove the Terminal Panel CMX. (Connector, Screws × 9)
- ⑤ Remove the RGB Base. (Screws × 4)



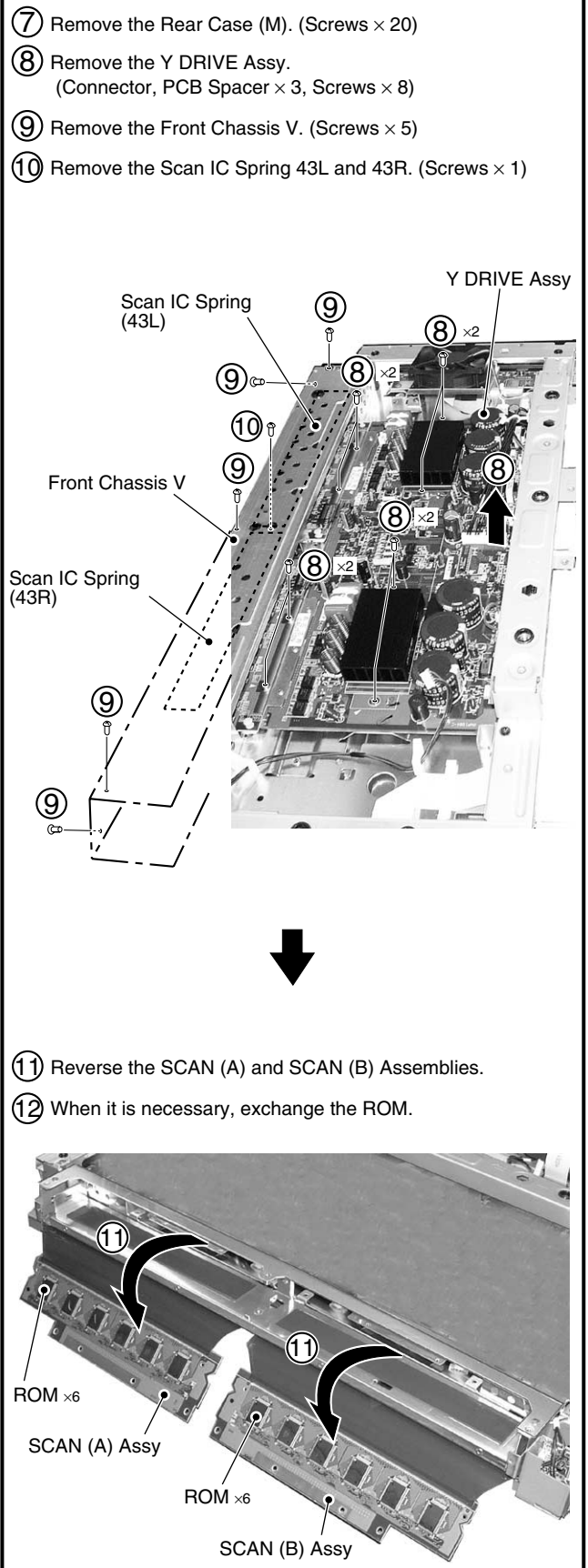
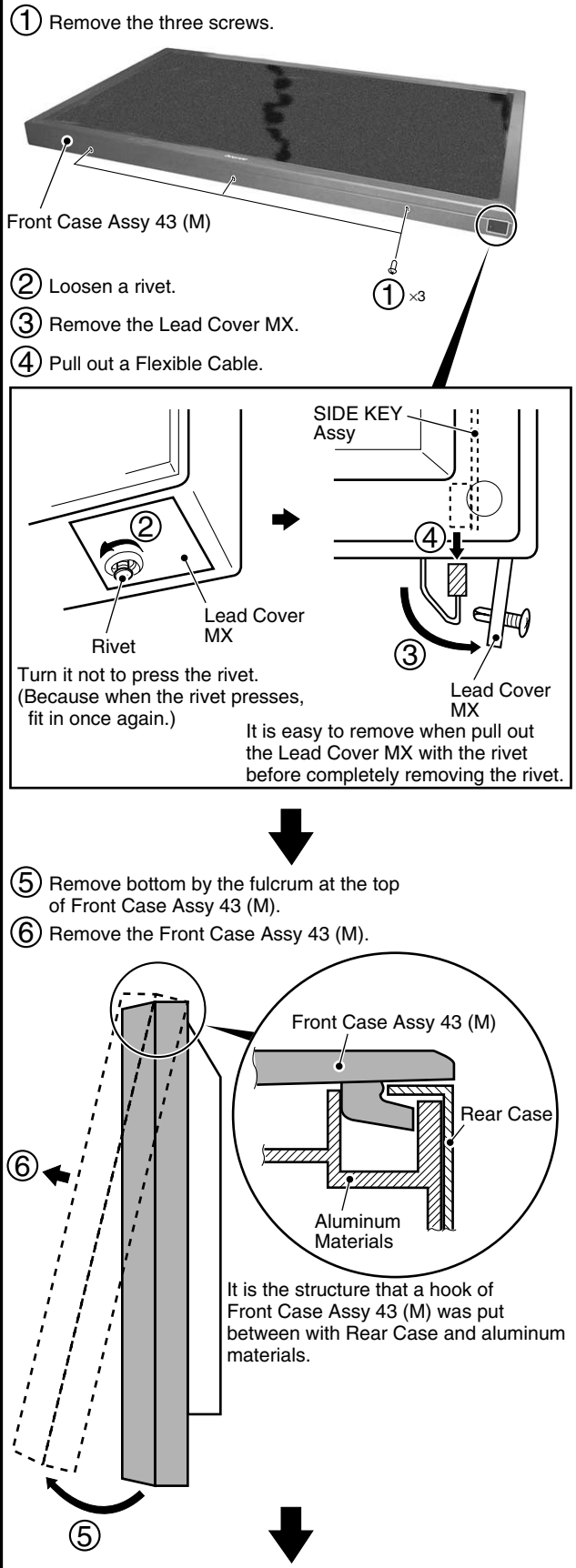
- ⑥ Remove connectors and binders,  
and remove the RGB Base with PCB Assys.



- ⑦ Remove the DIGITAL VIDEO Assy.  
(Connector, Circuit Board Spacer × 6)

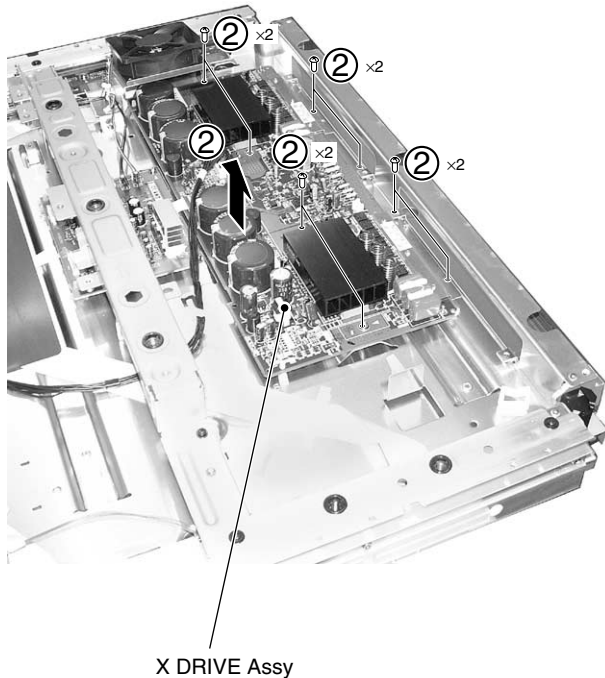


# Y DRIVE, SCAN (A) and (B) Assemblies



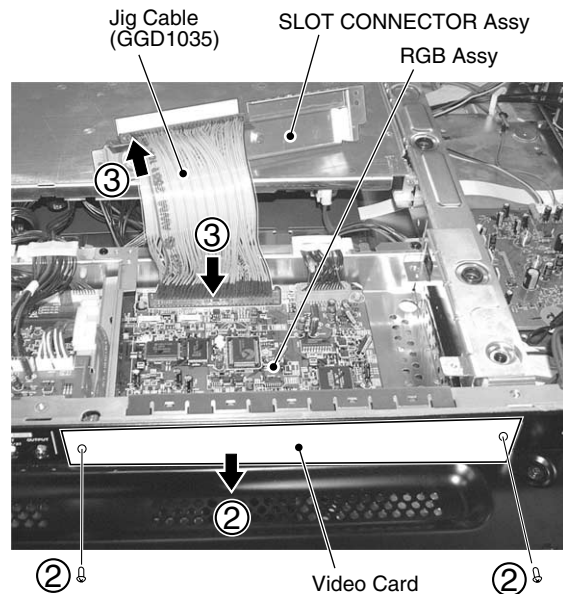
## X DRIVE Assy

- ① Remove the Rear Case (M). (Screws × 20)
- ② Remove the X DRIVE Assy. (Connector, Screws × 8)

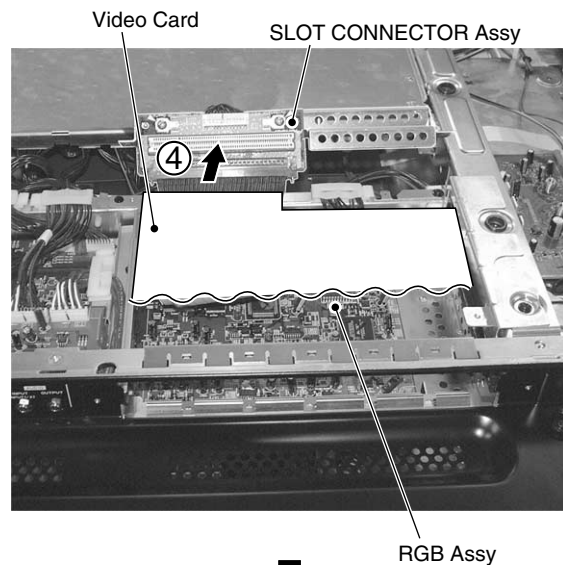


## Diagnosis of the Video Card (PDA-5002)

- ① Remove the Rear Case (M). (Screws × 20)
- ② Remove the Video Card. (Screws × 2)
- ③ Remove the SLOT CONNECTOR Assy from the RGB Assy and reconnect it with the Jig Cable (GGD1035).



- ④ Reconnect the Video Card. (Slot does not pass it.)



**Diagnosis**

## 7.2 IC INFORMATION

- The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

### •List of IC

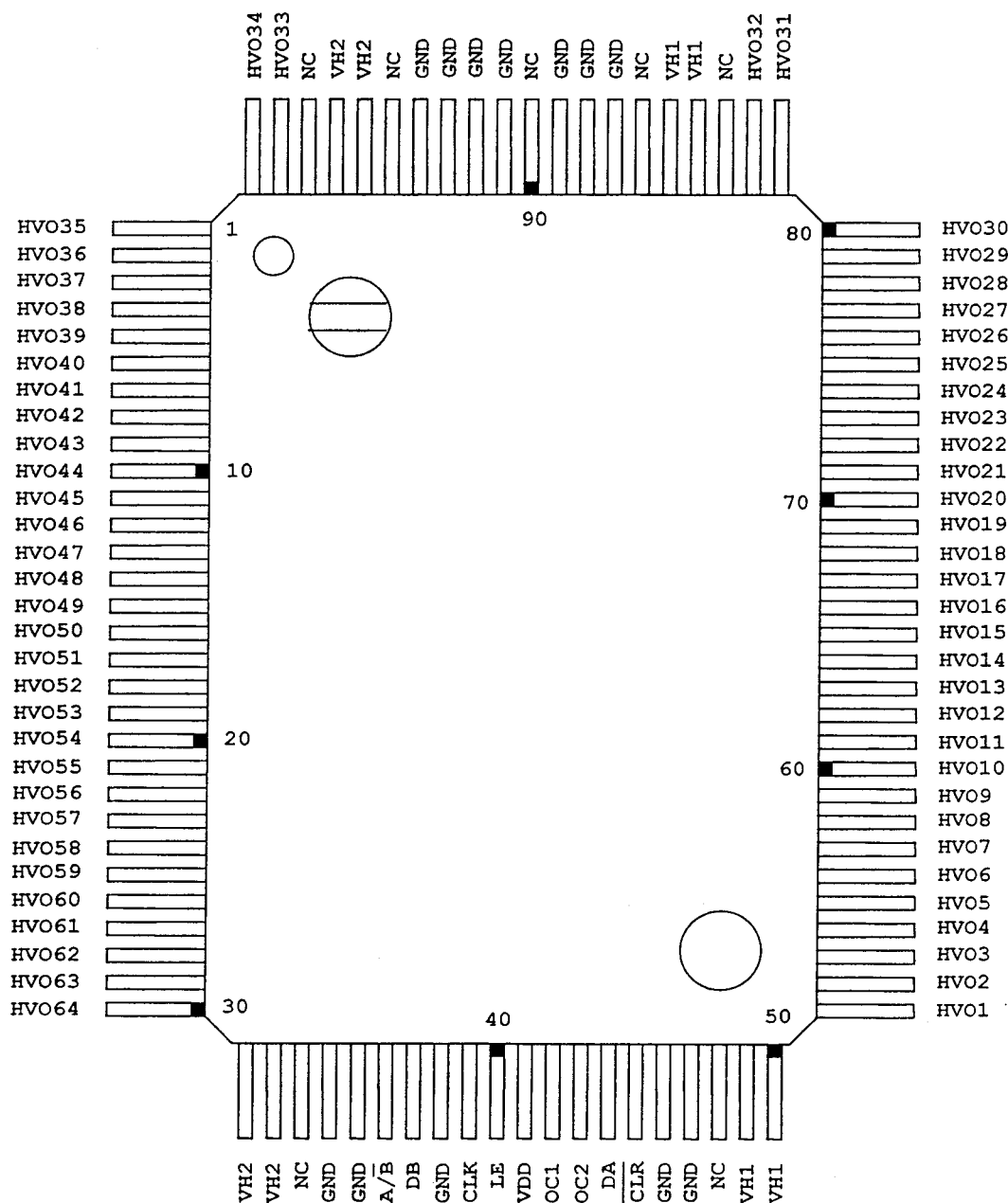
SN755860PJ, M30624FGAFP, HD64F2328VF, GAL22V10, M30624FGAFP, PD6358A, PST9246N, FS781BZB, ML6426CS-1, CXA3516R, BA5417, STK795-460

### ■ SN755860PJ (SCAN A ASSY : IC6201 - IC6206)

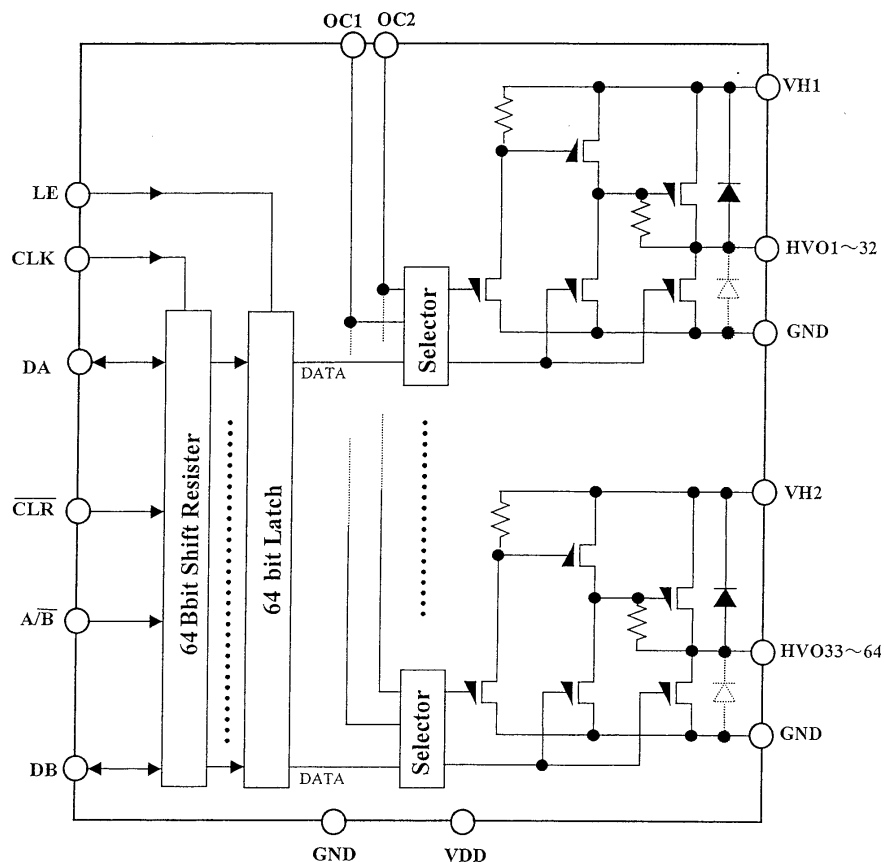
### SN755860PJ (SCAN B ASSY : IC6001 - IC6006)

- Scan IC

- Pin Assignment (Top view)



## ● Block Diagram



## ● Pin Function

Name	Pin No.	I/O	Num.	Function
CLK	39	I	1	Shift clock (start edge partial response)
DA	44	I/O	1	The serial data input of shifting register
DB	37	I/O	1	The serial data output of shifting register
LE	40	I	1	It output data done a latch of by "L" level.
A/ $\bar{B}$	36	I	1	A shift directional control signal of shift register
$\bar{CLR}$	45	I	1	It do data of shift register with "L" by "L" level.
OC1	42	I	1	An output control terminal of HVO
OC2	43	I	1	An output control terminal of HVO
HVO	1-30, 51-82, 99, 100	O	64	High voltage drive output (HV01-HV064)
VDD	41	-	1	Logic power supply
GND	34, 35, 38, 46, 47, 87-89, 91-94	-	12	Standard potential. This is common to HV01-HV064.
VH1	84, 85, 49, 50	-	4	The high potential circuit power supply which is common to HV01-HV032
VH2	31, 32, 96, 97	-	4	The high potential circuit power supply which is common to HV033-HV064
NC	33, 48, 95, 83, 86, 90, 98	-	7	It is the insulation electrically

## ■ M30624FGAFP (RGB ASSY : IC5505)

### • Main Microcomputer

### • Pin Function

No.	Pin Name	Function
1	TXD	Serial 3 line data output
2	CLK	Serial 3 line clock
3	FAN	FAN control
4	VOL	Audio VOL control
5	H_SYNC	Horizontal synchronizing signal input for signal distinction
6	V_SYNC	Vertical synchronizing signal input for signal distinction
7	DPMS	SYNC select for power management
8	BYTE	GND
9	CNVSS	Power supply in flash writing, STB +5V
10	NC	Non connection
11	XCONT (Not used)	GND
12	RST	Reset input
13	XOUT	Main clock output
14	VSS	GND
15	XIN	Main clock input
16	VCC	5V standby power
17	Not used	Pull-up
18	REM	Remote control signal input
19	REQ_MD	Communication request from the module microcomputer
20	KEY_SCAN	Key data input
21	WP SW	E2PROM write permission for Plug &Play
22	SLOT_ST2	Inside / outside product distinction of SLOT
23	FUNC1	Outside product SLOT function output 1
24	FUNC2	Outside product SLOT function output 2
25	NC	Non connection
26	NC	
27	NC	
28	NC	
29	SCL	Clock output for IICbus
30	SDA	Data input/output for IICbus
31	TXD1	Data output (flash writing / external equipment communication)
32	RXD1	Data input (flash writing / external equipment communication)
33	CLK1	Clock for flash writing
34	BUSY1	Busy for flash writing
35	TXD0	Data output for communication with the module microcomputer
36	RXD0	Data input for communication with the module microcomputer
37	LED_G	Green LED lighting
38	LED_R	Red LED lighting
39	NC	Non connection
40	IN1DET	INPUT1 input detection
41	EPM	EPM input for flash writing
42	AUDIO_NG	Audio NG detection
43	NC	Non connection
44	NC	
45	OSD_CE	Enable for OSD
46	CE	CE input for flash writing (pull-up)
47	WU_CE	Enable for waide microcomputer
48	FAN_NG	NG detection for fan
49	IN5DET	Video signal input detection
50	CB_MUTE	Combination mute



# PDP-433CMX, PDP-433MXE

No.	Pin Name	Function
51	FR_SEL	Output free running in the video signal no input
52	RGB_SEL	Input switch of INPUT1 (Dsub15) / INPUT2 (BNC)
53	POWER	POWER ON/OFF output
54	BUSY	Busy input from the microcomputer
55	BUSY30	Busy input from IC30
56	IN3DET	INPUT3 input detection
57	IN4DET	INPUT4 input detection
58	ACL_SW	Switch the peak ACL function
59	NC	Non connection
60	PNL_MUTE	Panel drive stop
61	NC	Non connection
62	VCC	5V standby power
63	I_DET	I/P distinction signal (extra)
64	VSS	GND
65	NC	Non connection
66	DIN_SEL	Digital input switch trigger (IC102 side)
67	SDIN_SEL	Digital input switch trigger (DVI input side)
68	FWE	Enable for flash writing of the wide microcomputer
69	MD2	Mode setting for flash writing of the wide microcomputer
70	RST_WU	Reset the wide microcomputer
71	WE_WU	Flash writing permission output for wide microcomputer
72	WE_MD	Flash writing permission output for module
73	NC	Non connection
74	REQ_WU	Communication request from the wide microcomputer
75	RST2	Reset detection of wide microcomputer system 3.3V power supply
76	EXT_INT	Input signal switch
77	A_MUTE1	Audio mute 1
78	A_MUTE2	Audio mute 2
79	H_POL	H.SYNC polarity distinction
80	V_POL	V.SYNC polarity distinction
81	(E)SCL	I2C-BUS clock of E2PROM exclusive use
82	(E)SDA	I2C-BUS data of E2PROM exclusive use
83	EEPRST	E2PROM reset
84	FIX_VAR	AUDIO output signal switch (fixing, variable)
85	SYNC_ST	Presence distinction input of SYNC
86	NC	Non connection
87	NC	
88	SIGRST	Trigger for synchronous processing time shortening
89	NC	Non connection
90	PLD_CE	Enable for SYNC control PLD
91	NC	Non connection
92	NC	
93	SLOT_ST	A/D input for model distinction
94	TEMP3	A/D input for temperature sensor 3
95	TEMP2	A/D input for temperature sensor 2
96	AVSS	GND for AD conversion (GND connection)
97	PM_ST	Pull-up
98	VREF	AD conversion reference voltage
99	AVCC	Power supply for AD conversion
100	RXD	Serial 3 line data input

# **HD64F2328VF (RGB ASSY : IC5601)**

- Wide Microcomputer

## **●Pin Function**

No.	Pin Name	Function
1	NC	Non connection
2	Not used	PU
3	VSS	GND
4	NC	Non connection
5	VCC	3.3V power supply
6	UA0	Address bus 0 with each IC
7	UA1	Address bus
8	UA2	
9	UA3	
10	VSS	GND
11	UA4	Address bus
12	UA5	
13	UA6	
14	UA7	
15	UA8	
16	UA9	
17	UA10	
18	UA11	
19	VSS	GND
20	UA12	Address bus
21	UA13	
22	UA14	
23	UA15	Address bus for external flash memory
24	UA16	
25	UA17	
26	UA18	
27	UA19	
28	VSS	GND
29	WU_CE	Main microcomputer communication enable
30	NC	Non connection
31	VI	Vertical synchronization interrupt input
32	VACT_FRC	Vact interrupt input after frame rate conversion
33	DE_W	DE interrupt for start line detection of panel link input V
34	VD_W	Vertical synchronization interrupts before FRC
35	VSS	GND
36	VSS	
37	VACT_IP	Histogram acquisition interrupt input
38	FILM_IP	Acquisition interrupt input of film information
39	VCC	3.3V power supply
40	UD0	Data bus
41	UD1	
42	UD2	
43	UD3	
44	VSS	GND
45	UD4	Data bus

# PDP-433CMX, PDP-433MXE

No.	Pin Name	Function
46	UD5	Data bus
47	UD6	
48	UD7	
49	UD8	
50	UD9	
51	UD10	
52	UD11	
53	VSS	GND
54	UD12	Data bus
55	UD13	
56	UD14	
57	UD15	
58	VCC	3.3V power supply
59	D_TXD	Communication data output to the main unit microcomputer
60	EXT_TXD	232C communication output to the external personal computer (FLASH2)
61	D_RXD	Communication data input from the main unit microcomputer
62	EXT_RXD	232C communication input from the external personal computer (FLASH2)
63	D_CLK	Communication clock input from the main unit microcomputer
64	D_BUSY	BUSY for the main unit microcomputer
65	VSS	GND
66	CS_30	Chip select output for IC30
67	VSS	GND
68	VSS	
69	CS_FLASH	Chip select output for 16M flash
70	A19_FLASH	Control output of 16M flash address A19
71	REQ_WU	Request for the main unit microcomputer
72	CE_W	DE for start line detection of panel link input V
73	VD_W	Vertical synchronization before FRC
74	NC	Non connection
75	NC	
76	NC	
77	NC	
78	NC	
79	SGLB_AD	Switching output of a clock and 1/2 clock
80	FWE	Writing enable signal input for built-in flash memory
81	RESET	Reset input from the main unit microcomputer and reset IC
82	Not used	Pull-up
83	Not used	
84	VCC	3.3V power supply
85	XTAL	Connect a ceramic resonator (25MHz)
86	EXTAL	
87	VCC	3.3V power supply
88	PHAI	System clock output
89	VCC	3.3V power supply
90	SGLB_IP	Single input selecting output of IC102

No.	Pin Name	Function
91	RDB	Reading of external address space
92	HWRB	Upper rank data (D15 to D8) writing of external address space
93	PLL_CE	Chip enable signal output for AD/PLL
94	WAIT_IP	WAIT input for IC102
95	NC	Non connection
96	NC	
97	TXD_WU	Communication data output (AD/PLL)
98	NC	Non connection
99	VSS	GND
100	VSS	
101	SCK_WU	Communication clock input/output (AD/PLL)
102	WAIT_FLASH	WAIT input for external flash memory
103	AVCC	3.3V power supply
104	VREF	A/D and D/A reference voltage input
105	ULK_PLL	PLL unlock signal input
106	EXT_FILM	External film signal input
107	Not used	Pull-up
108	Not used	
109	ACL_PC	ACL input for PC (A/D input)
110	Not used	Pull-up
111	INa_30	NC
112	INb_30	
113	AVSS	GND
114	VSS	
115	NC	Non connection
116	NC	
117	HD_W	Horizontal sync. signal
118	FI	FILM mode detecting input
119	HI	Horizontal sync. count input
120	FDET_IP	System frequency detecting input
121	EMG_IP	IC102 forced hardware through output
122	IP_KILL	IC101 forced stop output
123	MD0	Wide microcomputer operation mode (mode 6 fixing) (0)
124	MD1	Wide microcomputer operation mode (mode 6 fixing) (1)
125	MD2	Wide microcomputer operation mode (mode 6 fixing) (2)
126	IC_RST	Reset signal input for ASIC
127	CS_102	Chip select output for IC102
128	CS_101	Chip select output for IC101

## ■ HD64F2328VF (DIGITAL VIDEO ASSY : IC1101)

### • Panel Microcomputer

#### • Pin Function

No.	Pin Name	Function
1	CS_23	PE5064 (IC 1703) control output
2	NC	NC terminal
3	VSS	GND
4	VSS	GND
5	VCC	3.3V power supply
6	UA0	Address bus
7	UA1	Address bus
8	UA2	Address bus
9	UA3	Address bus
10	VSS	Address bus
11	UA4	Address bus
12	UA5	Address bus
13	UA6	Address bus
14	UA7	Address bus
15	UA8	Address bus
16	UA9	Address bus
17	UA10	Address bus
18	UA11	Address bus
19	VSS	GND
20	UA12	Address bus
21	UA13	Address bus
22	UA14	Address bus
23	UA15	Address bus
24	UA16	Address bus
25	UA17	Address bus
26	UA18	Address bus
27	UA19	Address bus
28	VSS	GND
29	UA20	Address bus
30	PA5	NC terminal
31	PA6	NC terminal
32	PA7	NC terminal
33	CE_PN	Enables/ for panel microcomputer
34	CE_PN	Enables/ for panel microcomputer
35	VSS	GND
36	VSS	GND
37	APLP	The APL value acquisition trigger signal input.
38	VD_31	The V signal input from IC 1401 (PD 6358).
39	VCC	3.3V power supply
40	UD0	Data bus
41	UD1	Data bus
42	UD2	Data bus
43	UD3	Data bus
44	VSS	GND
45	UD4	Data bus
46	UD5	Data bus
47	UD6	Data bus
48	UD7	Data bus
49	UD8	Data bus
50	UD9	Data bus

No.	Pin Name	Function
51	UD10	Data bus
52	UD11	Data bus
53	VSS	GND
54	UD12	Data bus
55	UD13	Data bus
56	UD14	Data bus
57	UD15	Data bus
58	VCC	3.3V power supply
59	D_TXD	Communication with IC 1207 (a module microcomputer).
60	EXT_TXD	Communication with the outside (program notes).
61	D_RXD	Communication with IC 1207 (a module microcomputer).
62	EXT_RXD	Communication with the outside (program notes).
63	D_CLK	Communication with IC 1207 (a module microcomputer).
64	P60	NC terminal
65	VSS	GND
66	CS_FLASH	A flash memory control terminal
67	VSS	GND
68	VSS	GND
69	P61	NC terminal
70	UDREQ	IC 1703 (PE5064) control terminal
71	P63	NC terminal
72	WE_FLASH	A flash memory note control signal (unused).
73	BUSY	The command receipt of a message lye Norwich output
74	REQ_PU	A communication demand to a module microcomputer.
75	SEL23B	IC 1703 (PE5064) control terminal
76	CLRB	IC 1703 (PE5064) control terminal
77	FR_SEL	The free LAN select signal output
78	RST31B	The reset output to IC1301, IC1401(PD6358)
79	RST23B	The reset output to IC 1703 (PE5064)
80	FWE	Microcomputer program note control signal
81	RESET	Reset input
82	NMI	The at the rate of tang input (unuse)
83	STBY	The hardware standby input (unused)
84	VCC	3.3V power supply
85	XTAL	A clock oscillation child connection terminal
86	EXTAL	A clock oscillation child connection terminal
87	VSS	GND
88	PF7	NC terminal
89	VCC	3.3V power supply
90	PF6	NC terminal
91	RDB	A read control terminal from an outside slave device
92	HWRB	A wright control terminal to an outside slave device
93	PF3	NC terminal
94	PF2	NC terminal
95	PF1	NC terminal
96	PF0	NC terminal
97	P50	NC terminal
98	P51	NC terminal
99	VSS	GND
100	VSS	GND

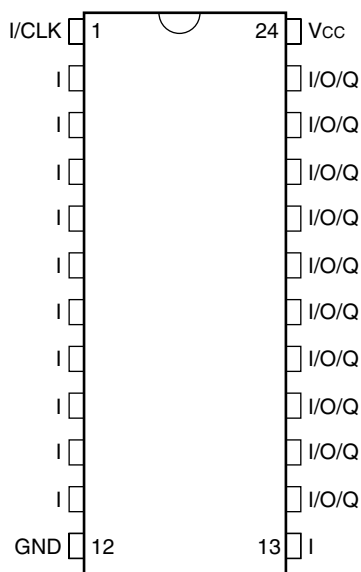
## PDP-433CMX, PDP-433MXE

No.	Pin Name	Function
101	P52	NC terminal
102	P53	NC terminal
103	AVCC	3.3V power supply
104	VREF	A/D, D/A reference voltage input (unused)
105	STOPB	The drive control input from IC 1703 (PE5064)
106	P41	NC terminal
107	RYBY	The flash memory note ready input
108	ADR_K_EMG_L1	The emergency input from panel bottom address resonance block.
109	ADR_K_EMG_U1	The emergency input from panel upper part address resonance block
110	ADR_K_EMG_L2	The emergency input from panel bottom address resonance block. (unused)
111	ADR_K_EMG_U2	The emergency input from panel upper part address resonance block(unused)
112	P47	NC terminal
113	AVSS	GND
114	VSS	GND
115	MUTE_ADR	The panel mute signal output
116	MUTE_SUS	The XY drive mute signal output (unused)
117	P15	NC terminal
118	HD	The HD signal input from outside ASSY (RGB ASSY, etc)
119	P13	NC terminal
120	P12	NC terminal
121	PC_VIDEO	The PC/Video identification output
122	VD	The VD signal input from outside ASSY (RGB ASSY, etc)
123	MD0	The microcomputer mode of operation select signal input
124	MD1	The microcomputer mode of operation select signal input
125	MD2	The microcomputer mode of operation select signal input
126	PG0	NC terminal
127	CS_31Y	IC1301, IC1401(PD 6358) control terminal
128	CS_31X	IC1301, IC1401(PD 6358) control terminal

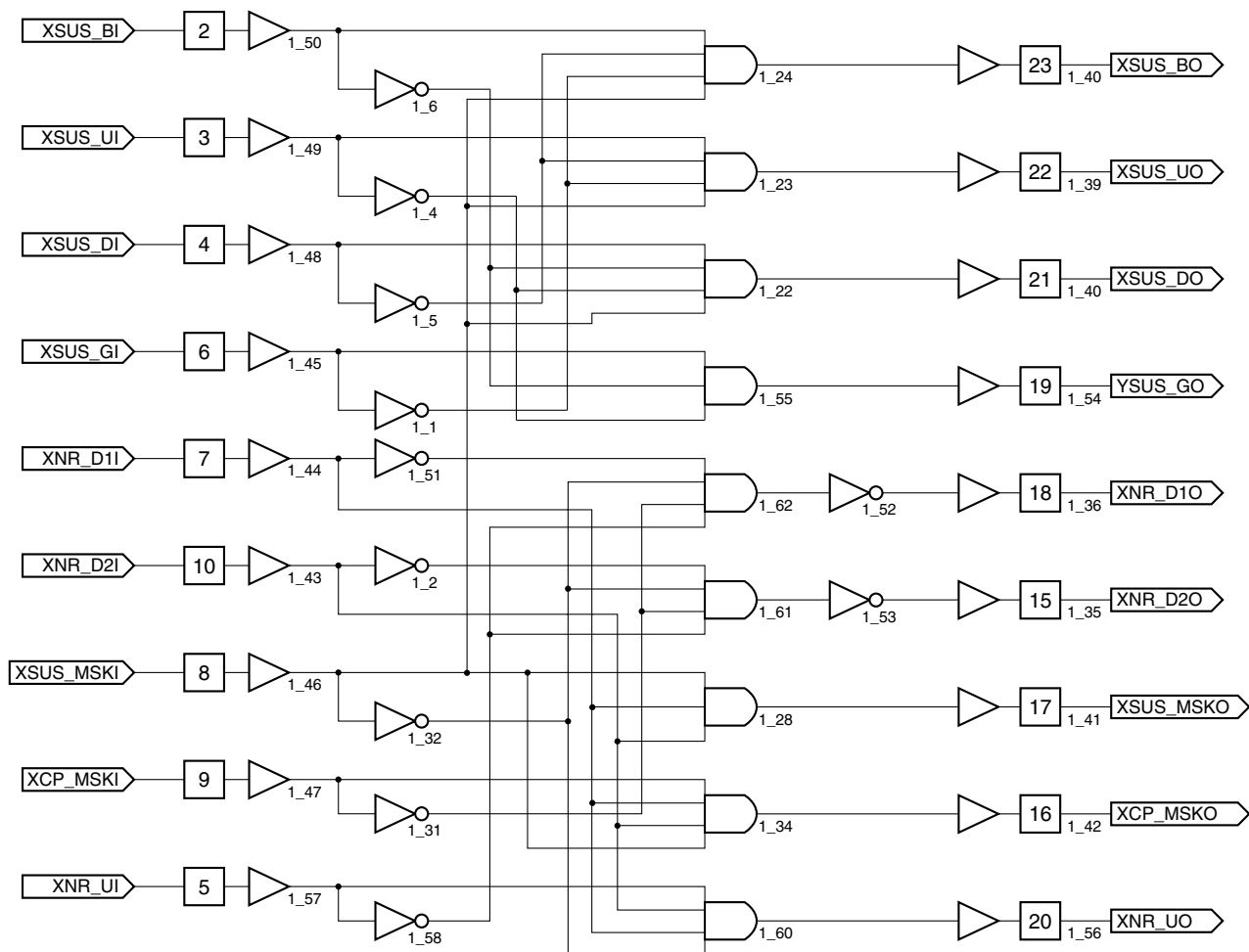
## ■ GAL22V10 (X DRIVE ASSY : IC2006)

- Drive Protect PLD

### • Pin Assignment (Top View)



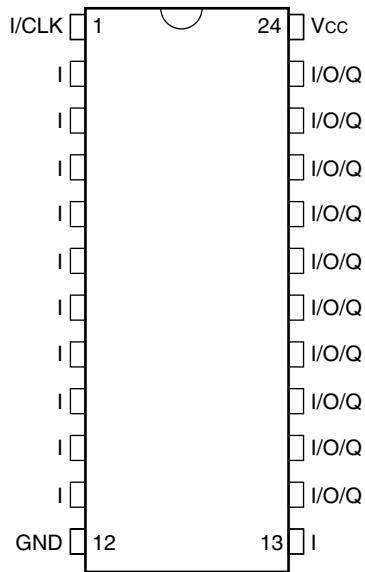
### • Block Diagram



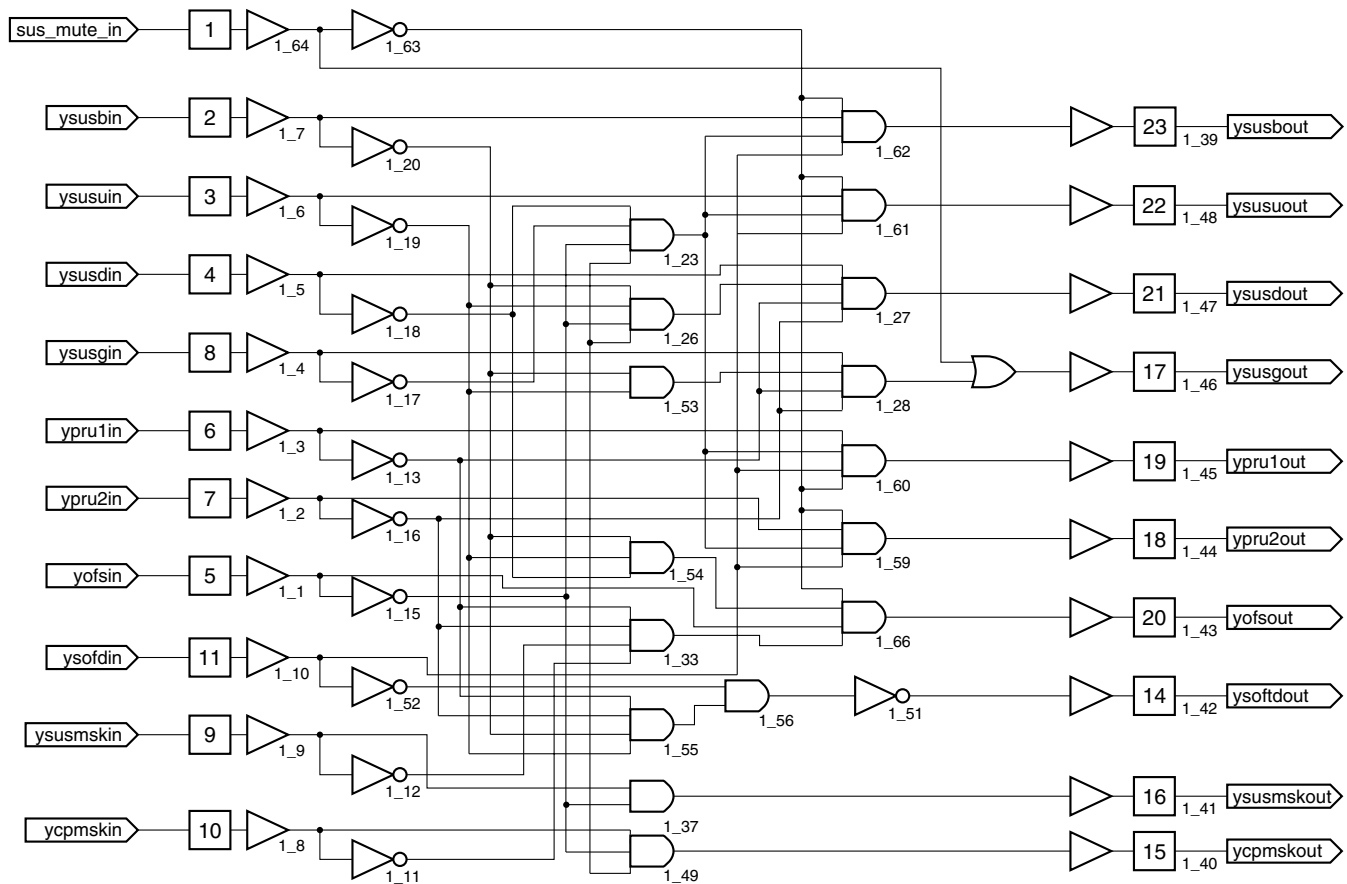


## ■ GAL22V10 (Y DRIVE ASSY : IC3003)

- Drive Protect PLD
- Pin Assignment (Top View)



## • Block Diagram



# **■ M30624FGAFP (DIGITAL VIDEO ASSY : IC1207)**

## **• Module Microcomputer**

### **• Pin Function**

No.	Pin Name	Function
1	TXD	Serial 3 line data output for communication with a panel microcomputer
2	CLK	Serial 3 line clock for communication with a panel microcomputer
3	NC	NC terminal
4	NC	NC terminal
5	NC	NC terminal
6	NC	NC terminal
7	NC	NC terminal
8	BYTE	The external data bus width reshuffling input (I am unused and connect GND)
9	CNVSS	A power supply for program note (a note, 5V, usually, pull-down
10	XCIN	NC terminal
11	XCOUT	NC terminal
12	RESET	A reset input terminal
13	XOUT	Clock output terminal
14	VSS	GND
15	XIN	Clock input terminal
16	VCC	5V standby power
17	NMI	Because a NMI interruption terminal is unused, It handle pull up.
18	REM	The SR signal input
19	REQ_PU	A communication demand from a panel microcomputer (the pulse meter acquisition)
20	/SW_TRG	Main switch OFF / ON search
21	NC	NC terminal
22	NC	NC terminal
23	NC	NC terminal
24	AC_OFF	AC power OFF search and power supply ASSY differentiation.
25	PD_TRIGGER	Power down search
26	NC	NC terminal
27	NC	NC terminal
28	NC	NC terminal
29	SCL	EEPROM, IIC communication with power supply ASSY
30	SDA	EEPROM, IIC communication with power supply ASSY
31	TXD1	Communication with the outside (a program note)
32	RXD1	Communication with the outside (a program note)
33	CLK1	Communication with the outside (a program note)
34	BUSY1	Communication with the outside (a program note)
35	TXD0	Communication with outside ASSY (microcomputers main in RGB ASSY, etc)
36	RXD0	Communication with outside ASSY (microcomputers main in RGB ASSY, etc)
37	NC	NC terminal
38	REQ_MD/A_MUTE	232C communication demand (a request to a main microcomputer) / audio system mute
39	NC	NC terminal
40	NC	NC terminal
41	EPM	The EPM input for program note (L fixation)
42	NC	NC terminal
43	PU_CE	Enables/ for panel microcomputer
44	NC	NC terminal
45	MOD_SW/A_NG	The model of machines distinction input / audio system NG input
46	CE	The CE input for program note (H fixation)
47	DITHER/SW_STC	Power supply search of a dither setting / media receiver for module
48	NC	NC terminal
49	/SW_STP	Power supply search of a panel
50	NC	NC terminal

No.	Pin Name	Function
51	NC	NC terminal
52	RELAY	The output for power supply ON / OFF change
53	POWER/MSTATE	Input / SII861 master information for power supply ON / OFF change
54	NC	NC terminal
55	WE_PN	Buffer state control for panel microcomputer note
56	MD0	The panel microcomputer mode of operation change output
57	MD2	The panel microcomputer mode of operation change output
58	FWE	The panel microcomputer program note control signal output
59	RST_PU	The panel microcomputer reset output
60	PN_MUTE	The panel mute input
61	NC	NC terminal
62	VCC	5V standby power
63	NC	NC terminal
64	VSS	GND
65	NC	NC terminal
66	NC	NC terminal
67	/A_SCL	IIC clock for audio system
68	/A_SDA	IIC data for audio system
69	APD_MUTE	A mute signal of address series
70	ADR_K_PD	The address oscillatory system PD input
71	ADR_PD	The address series PD input
72	DCC_PD	The power supply system PD input
73	NC	NC terminal
74	NC	NC terminal
75	RST2	Panel microcomputer reset search
76	NC	NC terminal
77	/DDC_SCL	IIC communication with a media receiver
78	/DDC_SDA	IIC communication with a media receiver
79	NC	NC terminal
80	NC	NC terminal
81	DEW_DET	The dew condensation sensor input
82	NC	NC terminal
83	NC	NC terminal
84	NC	NC terminal
85	NC	NC terminal
86	LED_G	Green LED lighting (LED on interface ASSY in a panel module)
87	LED_R	Red LED lighting (LED on interface ASSY in a panel module)
88	NC	NC terminal
89	BUSY	Communication permission / inhibiting signal from a panel microcomputer
90	NC	NC terminal
91	NC	NC terminal
92	/F_KEY1	The front KEY input
93	MAX_PLS2/F_KEY2	The terminal / front KEY input for brightness setting mode of operation change
94	TEMP1	The A/D input for temperature sensor
95	MAX_PLS? /CCKM	Terminal / connection search for brightness setting mode of operation change
96	AVSS	GND for AD conversion
97	PM_ST	The A/D input for model of machines distinction
98	VREF	Reference voltage for AD conversion
99	AVCC	5V standby power for AD conversion
100	RXD	Serial 3 line data entry for communication with a panel microcomputer

# **■ PD6358A (DIGITAL VIDEO ASSY : IC1301)**

• Picture Improved IC

## **● Pin Function**

No.	Pin Name	Function
1	VSS	GND
2	TESTO6	Test output terminal (unused)
3	OSDCLK	The CLK input for OSD
4	TTST	Test input terminal (unused)
5	VDDI	2.5V power supply
6	OVDDE-01	3.3V power supply
7	AGO0	Address data output (G signal)
8	VDDI	2.5V power supply
9	AGO2	Address data output (G signal)
10	AGO3	Address data output (G signal)
11	AGO4	Address data output (G signal)
12	VDDI	2.5V power supply
13	ARO6	Address data output (R signal)
14	AGO7	Address data output (G signal)
15	VDDI	2.5V power supply
16	ARO9	Address data output (R signal)
17	ABO9	Address data output (B signal)
18	VDDI	2.5V power supply
19	ADRCLKO2	The address CLK output (for panel upper part)
20	ARO12	Address data output (R signal)
21	ARO13	Address data output (R signal)
22	AGO14	Address data output (G signal)
23	AGO15	Address data output (G signal)
24	ARO16	Address data output (R signal)
25	ARO17	Address data output (R signal)
26	VSS	GND
27	ABO17	Address data output (B signal)
28	AGO17	Address data output (G signal)
29	AGO18	Address data output (G signal)
30	ABO19	Address data output (B signal)
31	UDAT15	Microcomputer data bus
32	UDAT12	Microcomputer data bus
33	UDAT9	Microcomputer data bus
34	UDAT5	Microcomputer data bus
35	OVDDE-06	3.3V power supply
36	APLP	APL value output trigger signal
37	OVDDE-08	3.3V power supply
38	CS5BI	The chip select input
39	CS4BI	The chip select input
40	UADRI13	Microcomputer address bus
41	UADRI9	Microcomputer address bus
42	UADRI6	Microcomputer address bus
43	UADRI2	Microcomputer address bus
44	UADRI1	Microcomputer address bus
45	TESTI2	Test input terminal (unused)
46	BIT0	The subfield No output (the 0 bit)
47	OVDDE-11	3.3V power supply
48	TESTO4	Test output terminal (unused)
49	ARO39	Address data output (G signal)
50	AGO38	Address data output (G signal)

No.	Pin Name	Function
51	VSS	GND
52	ABO37	Address data output (B signal)
53	ABO36	Address data output (B signal)
54	ARO36	Address data output (R signal)
55	ABO34	Address data output (B signal)
56	ADRCLKO4	The address CLK output (for panel bottom part)
57	AGO33	Address data output (G signal)
58	AGO32	Address data output (G signal)
59	AGO31	Address data output (G signal)
60	AGO30	Address data output (G signal)
61	AGO29	Address data output (G signal)
62	VDDI	2.5V power supply
63	ABO27	Address data output (B signal)
64	AGO26	Address data output (G signal)
65	VDDI	2.5V power supply
66	AGO24	Address data output (G signal)
67	VDDI	2.5V power supply
68	ABO22	Address data output (B signal)
69	VDDI	2.5V power supply
70	ARO21	Address data output (R signal)
71	ARO20	Address data output (R signal)
72	VDDI	2.5V power supply
73	OVDDE-14	3.3V power supply
74	TDI	The JTAG input
75	RBI9	The R picture B aspect signal input (the ninth bit)
76	VSS	GND
77	RBI8	The R picture B aspect signal input (the eighth bit)
78	RBI6	The R picture B aspect signal input (the sixth bit)
79	RBI4	The R picture B aspect signal input (the fourth bit)
80	OVSS-09	GND
81	RSTB	Reset input
82	GBI8	The G picture B aspect signal input (the eighth bit)
83	OVDDE-18	3.3V power supply
84	GBI5	The G picture B aspect signal input (the fifth bit)
85	GBI2	The G picture B aspect signal input (the second bit)
86	DEI	DE signal input
87	BBI6	The B picture B aspect signal input (the sixth bit)
88	BBI3	The B picture B aspect signal input (the third bit)
89	VDI	VD signal input
90	HDI	HD signal input
91	RAI6	The R picture A aspect signal input (the sixth bit)
92	RAI2	The R picture A aspect signal input (the second bit)
93	TESTI0	Test input terminal (unused)
94	OVSS-11	GND
95	GAI7	The G picture A aspect signal input (the seventh bit)
96	GAI3	The G picture A aspect signal input (the third bit)
97	GAI0	The G picture A aspect signal input (the 0 bit)
98	BAI6	The B picture A aspect signal input (the sixth bit)
99	BAI3	The B picture A aspect signal input (the third bit)
100	BAI0	The B picture A aspect signal input (the 0 bit)

No.	Pin Name	Function
101	TESTO7	Test output terminal (unused)
102	TESTO5	Test output terminal (unused)
103	OSDH	OSDH input
104	BLK	OSDBLK input
105	OSDB	OSDB signal input
106	NC	NC terminal
107	ARO1	Address data output (R signal)
108	ARO2	Address data output (R signal)
109	ARO3	Address data output (R signal)
110	ARO4	Address data output (R signal)
111	ARO5	Address data output (R signal)
112	ABO5	Address data output (B signal)
113	ARO7	Address data output (R signal)
114	ARO8	Address data output (R signal)
115	ABO8	Address data output (B signal)
116	AGO9	Address data output (G signal)
117	AGO10	Address data output (G signal)
118	ADRCLKO1	Address CLK output (for panel upper part)
119	ABO11	Address data output (B signal)
120	ABO12	Address data output (B signal)
121	ARO14	Address data output (R signal)
122	ARO15	Address data output (R signal)
123	ABO15	Address data output (B signal)
124	ABO16	Address data output (B signal)
125	AGO16	Address data output (G signal)
126	ARO18	Address data output (R signal)
127	AGO19	Address data output (G signal)
128	OVDDE-05	3.3V power supply
129	UDAT13	Microcomputer data bus
130	UDAT10	Microcomputer data bus
131	UDAT6	Microcomputer data bus
132	UDAT3	Microcomputer data bus
133	UDAT0	Microcomputer data bus
134	OVDDE-07	3.3V power supply
135	LR	The panel LR select input
136	RDBI	Microcomputer read control terminal
137	CLKSEL	CLK select input
138	UADRI10	Microcomputer address bus
139	UADRI7	Microcomputer address bus
140	UADRI3	Microcomputer address bus
141	CYCLEB	Address data output control signal
142	BIT2	Subfield No. output (the second bit)
143	SFSTB	Address data output control signal
144	OVSS-05	GND
145	TESTO2	Test output terminal (unused)
146	ABO38	Address data output (B signal)
147	ARO38	Address data output (R signal)
148	ARO37	Address data output (R signal)
149	AGO36	Address data output (G signal)
150	ARO35	Address data output (R signal)

No.	Pin Name	Function
151	ADRCLKO3	The address CLK output (for panel bottom part)
152	ABO33	Address data output (B signal)
153	ABO32	Address data output (B signal)
154	VDDI	2.5V power supply
155	ABO30	Address data output (B signal)
156	VDDI	2.5V power supply
157	ABO28	Address data output (B signal)
158	ARO28	Address data output (R signal)
159	ABO26	Address data output (B signal)
160	ABO25	Address data output (B signal)
161	ABO24	Address data output (B signal)
162	ARO24	Address data output (R signal)
163	ARO23	Address data output (R signal)
164	ARO22	Address data output (R signal)
165	AGO21	Address data output (G signal)
166	AGO20	Address data output (G signal)
167	TDO	JTAG signal
168	TMS	JTAG signal
169	RBI7	The R picture B aspect signal input (the seventh bit)
170	TCK	JTAG signal
171	RBI5	The R picture B aspect signal input (the fifth bit)
172	RBI3	The R picture B aspect signal input (the third bit)
173	RBI1	The R picture B aspect signal input (the first bit)
174	OVDDE-16	3.3V power supply
175	GBI7	The G picture B aspect signal input (the seventh bit)
176	OVSS-10	GND
177	GBI4	The G picture B aspect signal input (the fourth bit)
178	GBI1	The G picture B aspect signal input (the first bit)
179	BBI9	The B picture B aspect signal input (the ninth bit)
180	BBI5	The B picture B aspect signal input (the fifth bit)
181	BBI2	The B picture B aspect signal input (the second bit)
182	RAI9	The R picture A aspect signal input (the ninth bit)
183	CLK3	CLK input terminal (unused)
184	RAI5	The R picture A aspect signal input (the fifth bit)
185	RAI1	The R picture A aspect signal input (the first bit)
186	TESTI1	Test input terminal (unused)
187	GAI9	The G picture A aspect signal input (the ninth bit)
188	GAI6	The G picture A aspect signal input (the sixth bit)
189	GAI2	The G picture A aspect signal input (the second bit)
190	BAI9	The B picture A aspect signal input (the ninth bit)
191	BAI5	The B picture A aspect signal input (the fifth bit)
192	BAI2	The B picture A aspect signal input (the second bit)
193	BAI1	The B picture A aspect signal input (the first bit)
194	OVSS-01	GND
195	OVSS-02	GND
196	OSDG	OSDG signal input
197	ARO0	Address data output (R signal)
198	ABO0	Address data output (B signal)
199	ABO1	Address data output (B signal)
200	ABO2	Address data output (B signal)

No.	Pin Name	Function
201	ABO3	Address data output (B signal)
202	ABO4	Address data output (B signal)
203	OVDDE-02	3.3V power supply
204	ABO6	Address data output (B signal)
205	ABO7	Address data output (B signal)
206	VDDI	2.5V power supply
207	OVDDE-03	3.3V power supply
208	ARO10	Address data output (R signal)
209	ABO10	Address data output (B signal)
210	AGO11	Address data output (G signal)
211	AGO12	Address data output (G signal)
212	ABO13	Address data output (B signal)
213	ABO14	Address data output (B signal)
214	OVDDE-04	3.3V power supply
215	OVSS-03	GND
216	ARO19	Address data output (R signal)
217	TESTO1	Test output terminal (unused)
218	UDAT14	Microcomputer data bus
219	UDAT11	Microcomputer data bus
220	UDAT7	Microcomputer data bus
221	UDAT4	Microcomputer data bus
222	UDAT1	Microcomputer data bus
223	VDRD	V signal output
224	HWRBI	Microcomputer wright control terminal
225	UADRI14	Microcomputer address bus
226	OVDDE-09	3.3V power supply
227	UADRI11	Microcomputer address bus
228	UADRI8	Microcomputer address bus
229	UADRI4	Microcomputer address bus
230	BIT3	Subfield No. output (the third bit)
231	BIT1	Subfield No. output (the first bit)
232	OVDDE-10	3.3V power supply
233	TESTO3	Test output terminal (unused)
234	ABO39	Address data output (B signal)
235	AGO37	Address data output (G signal)
236	OVSS-06	GND
237	AGO35	Address data output (G signal)
238	ADRCLKO5	Address CLK output (for panel bottom part)
239	ARO34	Address data output (R signal)
240	ARO33	Address data output (R signal)
241	ABO31	Address data output (B signal)
242	ARO31	Address data output (R signal)
243	ABO29	Address data output (B signal)
244	ARO29	Address data output (R signal)
245	OVDDE-12	3.3V power supply
246	ARO27	Address data output (R signal)
247	ARO26	Address data output (R signal)
248	ARO25	Address data output (R signal)
249	OVDDE-13	3.3V power supply
250	AGO23	Address data output (G signal)

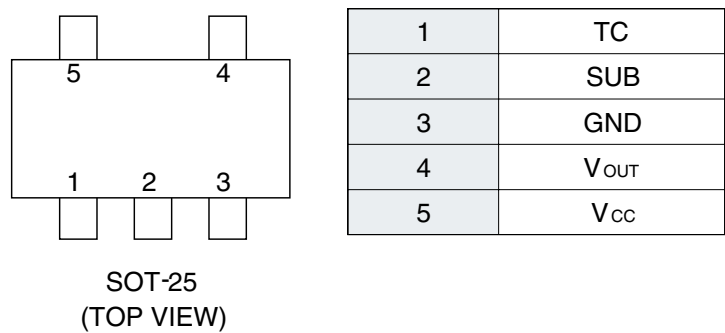


No.	Pin Name	Function
251	AGO22	Address data output (G signal)
252	VDDI	2.5V power supply
253	ABO20	Address data output (B signal)
254	OVSS-07	GND
255	OVDDE-15	3.3V power supply
256	OVSS-08	GND
257	RBI2	The R picture B aspect signal input (the second bit)
258	TRST	JTAG signal
259	GBI9	The G picture B aspect signal input (the ninth bit)
260	GBI6	The G picture B aspect signal input (the sixth bit)
261	OVDDE-17	3.3V power supply
262	GBI3	The G picture B aspect signal input (the third bit)
263	GBI0	The G picture B aspect signal input (the 0 bit)
264	BBI8	The B picture B aspect signal input (the eighth bit)
265	BBI4	The B picture B aspect signal input (the fourth bit)
266	BBI1	The B picture B aspect signal input (the first bit)
267	RAI8	The R picture A aspect signal input (the eighth bit)
268	OVDDE-19	3.3V power supply
269	RAI4	The R picture A aspect signal input (the fourth bit)
270	RAI0	The R picture A aspect signal input (the 0 bit)
271	FREERUN	The freerun control input
272	GAI8	The G picture A aspect signal input (the eighth bit)
273	GAI5	The G picture A aspect signal input (the fifth bit)
274	GAI1	The G picture A aspect signal input (the first bit)
275	BAI8	The B picture A aspect signal input (the eighth bit)
276	BAI4	The B picture A aspect signal input (the fourth bit)
277	VDDE	3.3V power supply
278	OSDV	OSDV input
279	VSS	GND
280	OSDR	OSDR signal input
281	VDDE	3.3V power supply
282	AGO1	Address data output (G signal)
283	VSS	GND
284	VDDI	2.5V power supply
285	VDDI	2.5V power supply
286	AGO5	Address data output (G signal)
287	AGO6	Address data output (G signal)
288	VDDI	2.5V power supply
289	AGO8	Address data output (G signal)
290	VSS	GND
291	ADRCLKO0	The address CLK output (for panel upper part)
292	VDDE	3.3V power supply
293	ARO11	Address data output (R signal)
294	VSS	GND
295	AGO13	Address data output (G signal)
296	VDDE	3.3V power supply
297	ABO18	Address data output (B signal)
298	VSS	GND
299	TESTO0	Test output terminal (unused)
300	VDDI	2.5V power supply

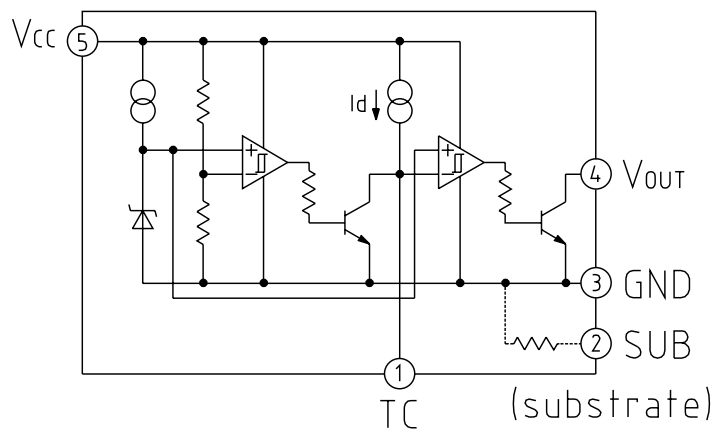
No.	Pin Name	Function
301	UDAT8	Microcomputer data bus
302	VSS	GND
303	UDAT2	Microcomputer data bus
304	VDDI	2.5V power supply
305	OVSS-04	GND
306	UADRI15	Microcomputer address bus
307	VDDI	2.5V power supply
308	UADRI12	Microcomputer address bus
309	VSS	GND
310	UADRI5	Microcomputer address bus
311	VDDI	2.5V power supply
312	NC	NC terminal
313	VSS	GND
314	AGO39	Address data output (G signal)
315	VDDE	3.3V power supply
316	ABO35	Address data output (B signal)
317	VSS	GND
318	AGO34	Address data output (G signal)
319	VDDE	3.3V power supply
320	ARO32	Address data output (R signal)
321	VSS	GND
322	ARO30	Address data output (R signal)
323	VDDI	2.5V power supply
324	AGO28	Address data output (G signal)
325	AGO27	Address data output (G signal)
326	NC	NC terminal
327	AGO25	Address data output (G signal)
328	VSS	GND
329	ABO23	Address data output (B signal)
330	VDDE	3.3V power supply
331	ABO21	Address data output (B signal)
332	VSS	GND
333	VPD	GND
334	VDDE	3.3V power supply
335	RBI0	The R picture B aspect signal input (the 0 bit)
336	VSS	GND
337	ACLK	CLK input (25MHz)
338	VDDI	2.5V power supply
339	CLK4	CLK input (50MHz)
340	VSS	GND
341	BBI7	The B picture B aspect signal input (the seventh bit)
342	VDDI	2.5V power supply
343	BBI0	The B picture B aspect signal input (the 0 bit)
344	RAI7	The R picture A aspect signal input (the seventh bit)
345	VDDI	2.5V power supply
346	RAI3	The R picture A aspect signal input (the third bit)
347	VSS	GND
348	CLK2	The image system CLK input
349	VDDI	2.5V power supply
350	GAI4	The G picture A aspect signal input (the fourth bit)
351	VSS	GND
352	BAI7	The B picture A aspect signal input (the seventh bit)

■ PST9246N (DIGITAL VIDEO ASSY : IC1208)

- Reset IC
- Pin Assignment (Top View)



• Block Diagram



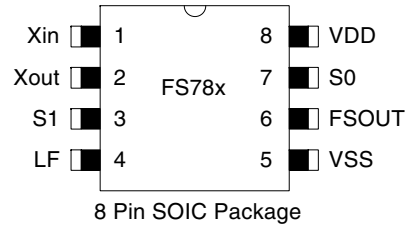
• Pin Function

Pin No.	Pin name	Functions
1	TC	T <sub>PLH</sub> control pin
2	SUB	Substrate pin
3	GND	GND pin
4	V <sub>OUT</sub>	Reset signal output pin
5	V <sub>CC</sub>	V <sub>CC</sub> pin/voltage detect pin

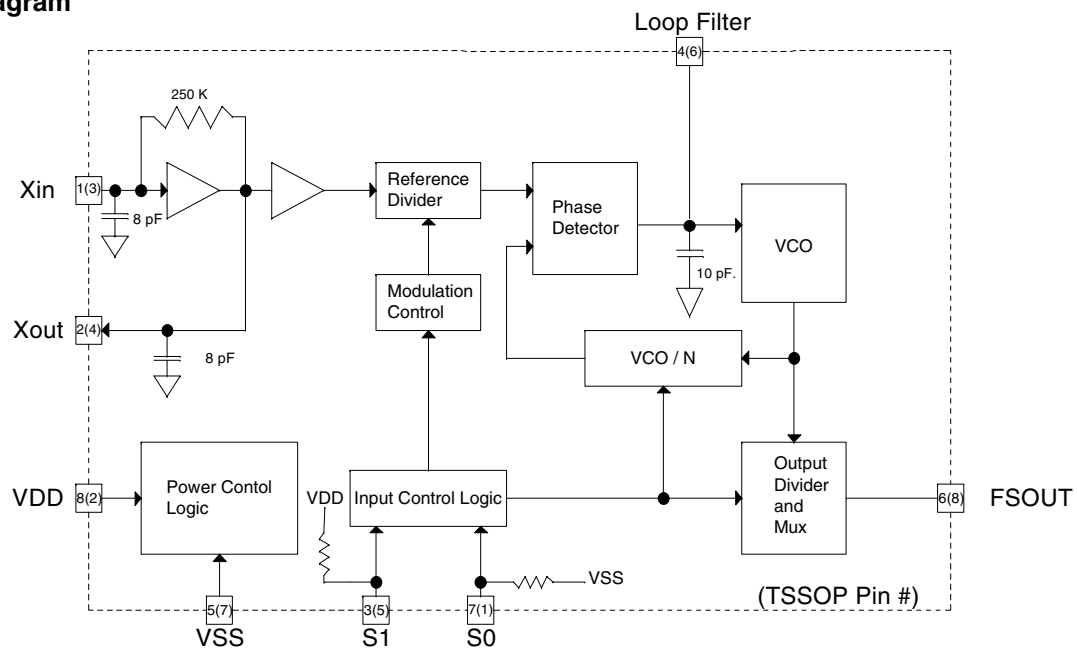
## ■ FS781BZB (DIGITAL VIDEO ASSY : IC1802)

- Low EMI Clock IC

### • Pin Assignment (Top View)



### • Block Diagram



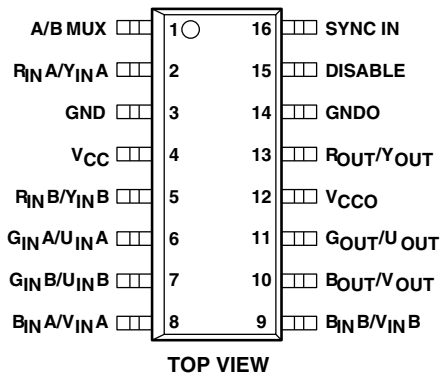
### • Pin Function

Pin No.	Pin Name	I/O	TYPE	Description
1/2	Xin / Xout	I/O	Analog	Pins form an on-chip reference oscillator when connected to terminals of an external parallel resonant crystal. Xin may be connected to TTL/CMOS external clock source. If Xin connected to external clock other than crystal, leave Xout (pin 2) unconnected.
7/3	S0 / S1	I	CMOS/TTL	Digital control inputs to select input frequency range and output frequency scaling. Refer to Tables 7 & 8 for selection. S0 has internal pulldown. S1 has internal pullup.
4	LF	I	Analog	Loop Filter. Single ended tri-state output of the phase detector. A two-pole passive loop filter is connected to Loop Filter (LF).
6	FSOUT	O	CMOS/TTL	Modulated Clock Frequency Output. The center frequency is the same as the input reference frequency for FS781. Input frequency is multiplied by 2x and 4x for FS782 and FS784 respectively.
8	VDD	P	Power	Positive Power Supply.
5	VSS	P	Power	Power Supply Ground

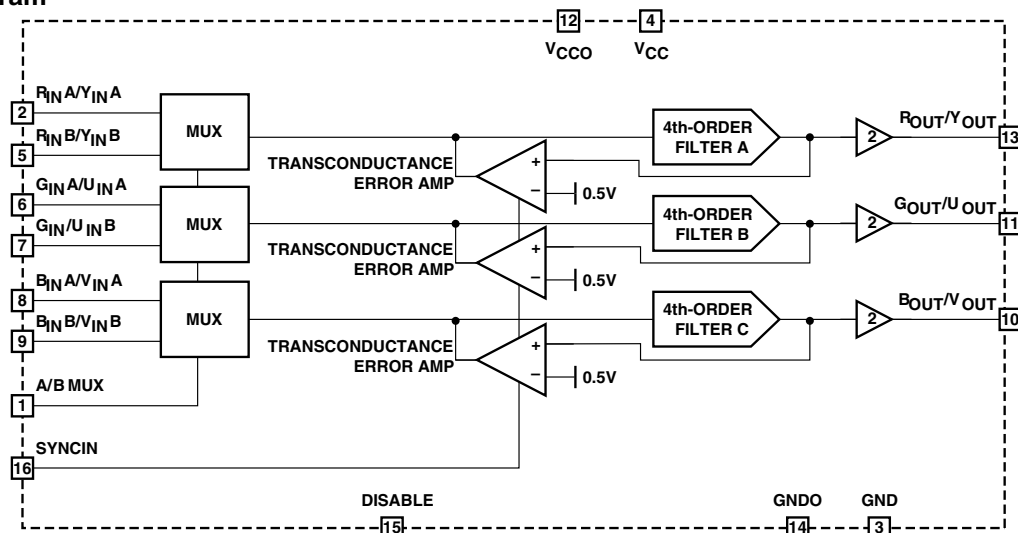
## ML6426CS-1 (RGB ASSY : IC4403)

• LPF IC

### • Pin Assignment (Top View)



### • Block Diagram



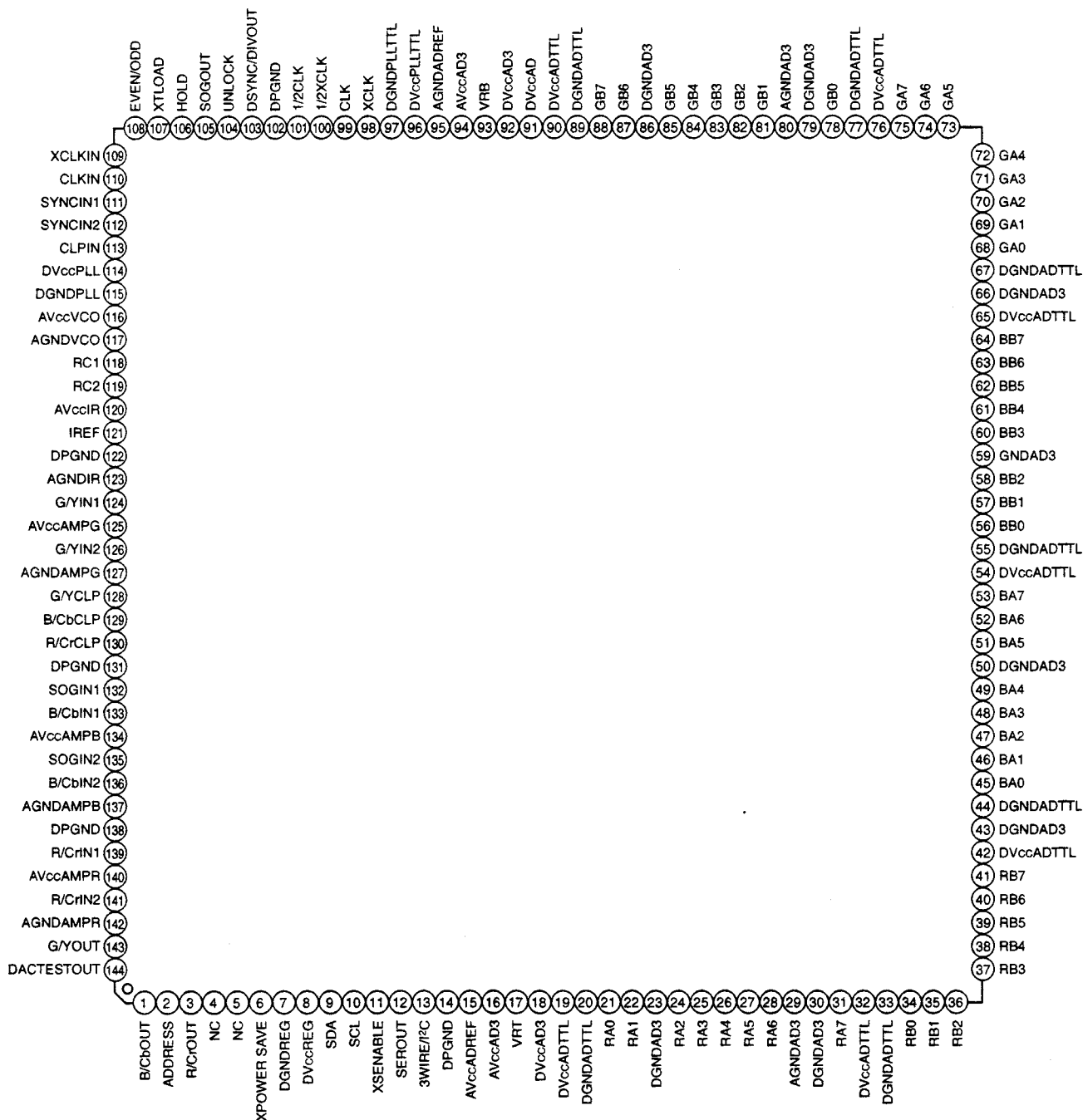
### • Pin Function

PIN	NAME	FUNCTION	PIN	NAME	FUNCTION
1	A/B MUX	Logic input pin to select between Bank <A> and Bank <B> video inputs. This pin is internally pulled high.	8	B_IN A/V_IN A	Unfiltered analog B- or V-channel input for Bank <A>. Sync must be provided at SYNC IN pin.
2	R_IN A/Y_IN A	Unfiltered analog R- or Y-channel input for Bank <A>. Sync must be provided at SYNC IN pin.	9	B_IN B/V_IN B	Unfiltered analog B- or V-channel input for Bank <B>. Sync must be provided at SYNC IN pin.
3	GND	Analog ground	10	B_OUT	Analog B or V-channel output
4	VCC	Analog 5V supply	11	G_OUT	Analog G or U-channel output
5	R_IN B/Y_IN B	Unfiltered analog R- or Y-channel input for Bank <B>. Sync must be provided at SYNC IN pin.	12	V_CCO	5V power supply for output buffers
6	G_IN A/U_IN A	Unfiltered analog G- or U-channel input for Bank <A>. Sync must be provided at SYNC IN pin.	13	R_OUT	Analog R or Y-channel output
7	G_IN B/U_IN B	Unfiltered analog G- or U-channel input for Bank <B>. Sync must be provided at SYNC IN pin.	14	GND	Analog ground
			15	DISABLE	Disable/Enable pin. Turns the chip off when logic high. Internally pulled low.
			16	SYNC IN	Input for an external H-sync logic signal for filter channels. CMOS level input. Active High.

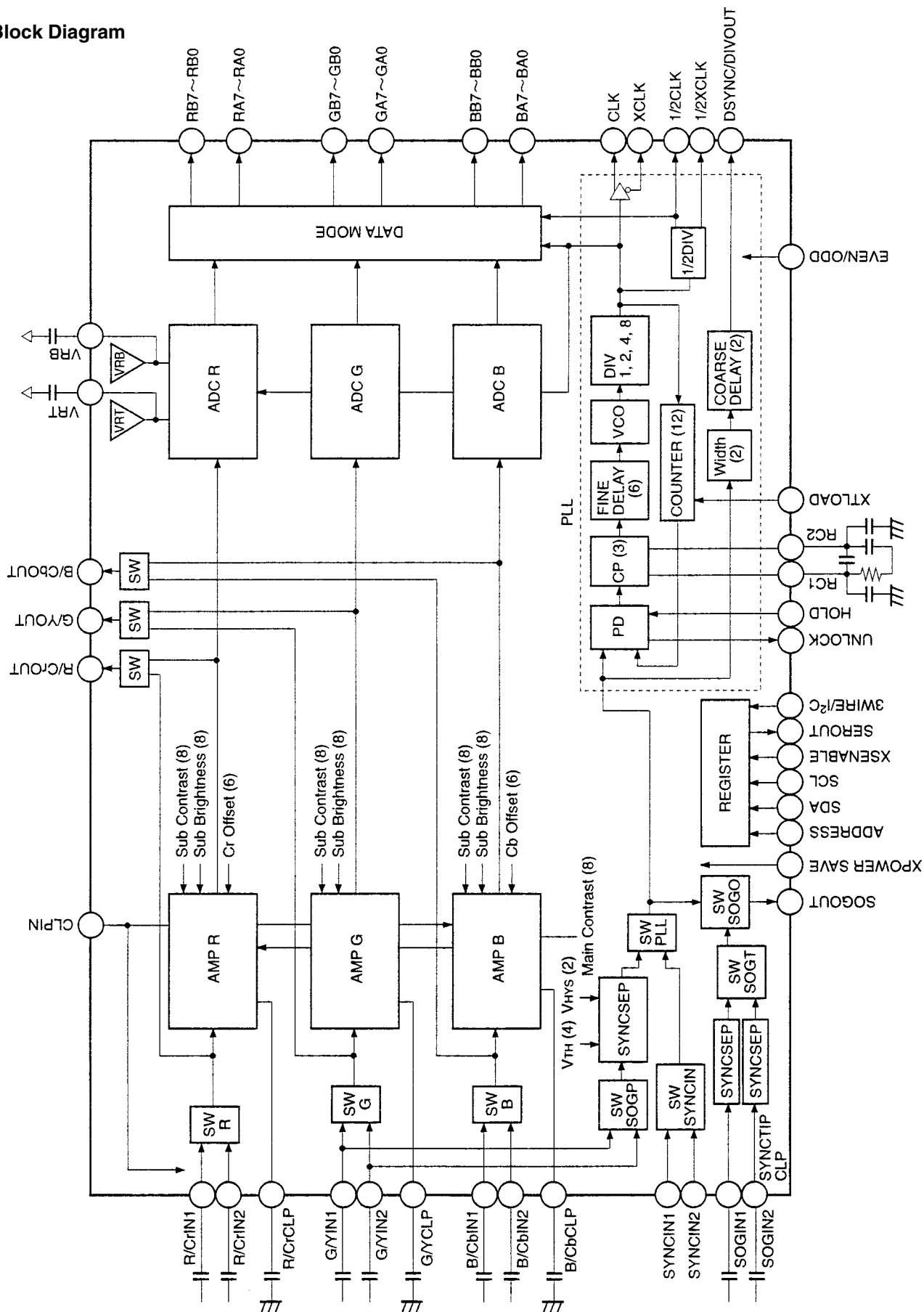
# **■ CXA3516R (RGB ASSY : IC4603)**

• AD + PLL IC

## • Pin Assignment (Top View)



- **Block Diagram**



## ● Pin Function

Pin No.	Symbol	I/O	Typical signal	Description
1	B/CbOUT	O	1.83V	Amplifier output signal monitor
2	ADDRESS	I	—	I <sup>2</sup> C slave address setting
3	R/CrOUT	O	1.83V	Amplifier output signal monitor
4	NC	—	—	Not used
5	NC	—	—	Not used
6	XPOWER SAVE	I	TTL	Power save setting
7	DGNDREG	—	GND	Register GND
8	DVccREG	—	5V	Register power supply
9	SDA	I	—	Control register data input
10	SCL	I	—	Control register CLK input
11	XSENABLE	I	TTL	Enable signal input for 3-wire control register
12	SEROUT	O	TTL	3-wire control register data readout
13	3WIRE/I <sup>2</sup> C	I	—	Selection of input between I <sup>2</sup> C bus and 3-wire bus
15	AVccADREF	—	5V	Reference power supply for A/D converter
16, 94	AVccAD3	—	3.3V	Analog power supply for A/D converter
17	VRT	O	2.9V	Top reference voltage output for A/D converter
18, 92	DVccAD3	—	3.3V	Digital power supply for A/D converter
19, 32, 42, 54, 65, 76, 90	DVccADTTL	—	5V	TTL output power supply for A/D converter
20, 33, 44, 55, 67, 77, 89	DGNDADTTL	—	GND	TTL output GND for A/D converter
21, 22, 24 to 28, 31	RA0 to RA7	O	TTL	Data output for R-channel port A side
23, 30, 43, 50, 59, 66, 79, 86	DGNDAD3	—	GND	Digital GND for A/D converter
29, 80	AGNDAD3	—	GND	Analog GND for A/D converter
34 to 41	RB0 to RB7	O	TTL	Data output for R-channel port B side
45 to 49, 51 to 53	BA0 to BA7	O	TTL	Data output for B-channel port A side
56 to 58, 60 to 64	BB0 to BB7	O	TTL	Data output for B-channel port B side
68 to 75	GA0 to GA7	O	TTL	Data output for G-channel port A side
78, 81 to 85, 87, 88	GB0 to GB7	O	TTL	Data output for G-channel port B side
91	DVccAD	—	5V	Digital power supply for A/D converter
93	VRB	O	1.9V	Bottom reference voltage output for A/D converter
95	AGNDADREF	—	GND	Reference voltage GND for A/D converter



# PDP-433CMX, PDP-433MXE

Pin No.	Symbol	I/O	Typical signal	Description
96	DVccPLLTTTL	—	5V	TTL output power supply for PLL
97	DGNDPLLTTTL	—	GND	TTL output GND for PLL
98	XCLK	O	TTL	Inverted CLK output
99	CLK	O	TTL	CLK output
100	1/2XCLK	O	TTL	Inverted 1/2CLK output
101	1/2CLK	O	TTL	1/2CLK output
103	DSYNC/ DIVOUT	O	TTL	DSYNC or DIVOUT signal output
104	UNLOCK	O	Open collector	Unlock signal output
105	SOGOUT	O	TTL	Output for SYNC ON GREEN
106	HOLD	I	TTL	Input for phase comparison disable signal
107	XTLOAD	I	TTL	Programmable counter reset setting
108	EVEN/ODD	I	TTL	Inverted pulse input of ADC sampling CLK
109	XCLKIN	I	PECL	Inverted CLK input for testing
110	CLKIN	I	PECL	CLK input for testing
111	SYNCIN1	I	TTL	Sync input 1
112	SYNCIN2	I	TTL	Sync input 2
113	CLPIN	I	TTL	Clamp pulse input
114	DVccPLL	—	5V	Digital power supply for PLL
115	DGNDPLL	—	GND	Digital GND for PLL
116	AVccVCO	—	5V	Analog power supply for PLL VCO
117	AGNDVCO	—	GND	Analog GND for PLL VCO
118	RC1	—	2.1V	External pin for PLL loop filter
119	RC2	—	2 to 4.5V	External pin for PLL loop filter
120	AVccIR	—	5V	Analog power supply for IREF
121	IREF	I	1.2V	Current setup
123	AGNDIR	—	GND	Analog GND for IREF
124	G/YIN1	I	—	G/Y signal input 1
125	AVccAMPG	—	5V	Power supply for G/Y amplifier block
126	G/YIN2	I	—	G/Y signal input 2
127	AGNDAMPG	—	GND	GND for G/Y amplifier block
128	G/YCLP	—	—	Clamp capacitor for brightness
129	B/CbCLP	—	—	Clamp capacitor for brightness
130	R/CrCLP	—	—	Clamp capacitor for brightness
132	SOGIN1	I	2.8V	SYNC ON GREEN signal input 1
133	B/CbIN1	I	—	B/Cb signal input 1

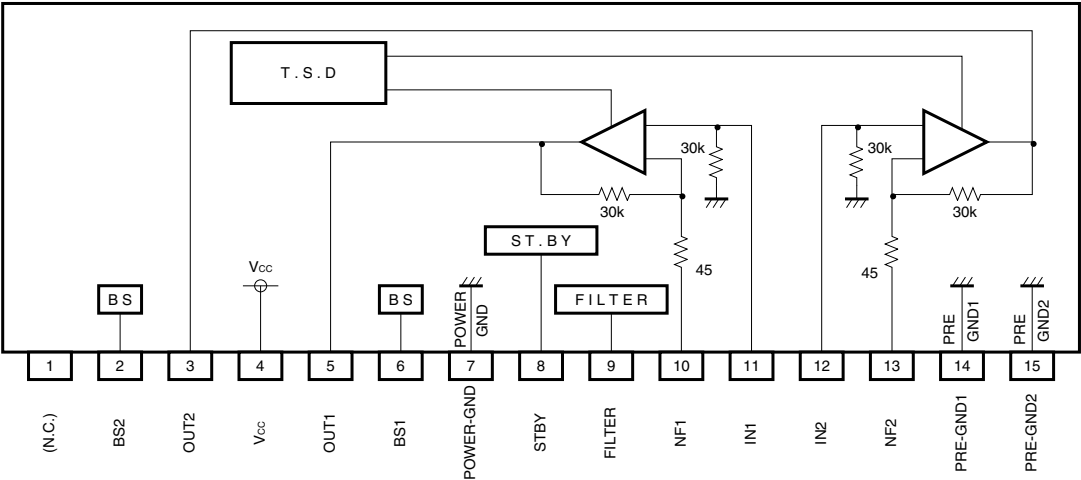
Pin No.	Symbol	I/O	Typical signal	Description
134	AVccAMPB	—	5V	Power supply for B/Cb amplifier block
135	SOGIN2	I	2.8V	SYNC ON GREEN signal input 2
136	B/CbIN2	I	—	B/Cb signal input 2
137	AGNDAMPB	—	GND	GND for B/Cb amplifier block
139	R/CrIN1	I	—	R/Cr signal input 1
140	AVccAMPR	—	5V	Power supply for R/Cr amplifier block
141	R/CrIN2	I	—	R/Cr signal input 2
142	AGNDAMPR	—	GND	GND for R/Cr amplifier block
143	G/YOUT	O	1.83V	Monitor pin for amplifier output signal
144	DAC TEST OUT	O	5V	DAC testing output for amplifier block control register
14, 102, 122, 131, 138	DPGND	—	GND	GND

PDP-433CMX, PDP-433MXE

■ BA5417 (MX AUDIO ASSY : IC8601)

• Power Amp.

● Block Diagram



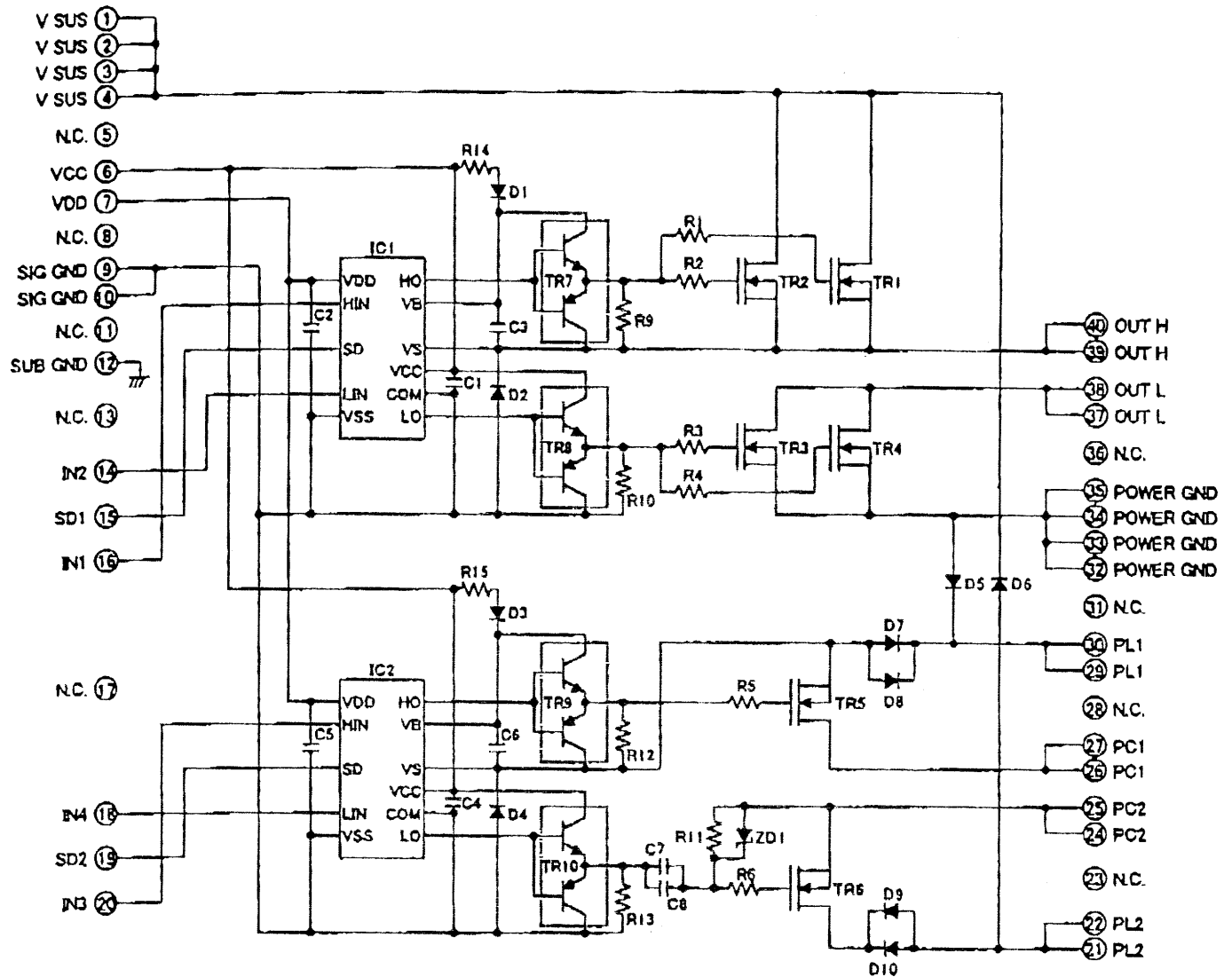
● Pin Function

Terminal No.	Name of terminal	Description
1	(NC)	—
2	BS2	Boot-strap terminal 2
3	OUT2	Output terminal 2
4	VCC	Power source terminal
5	OUT1	Output terminal 1
6	BS1	Boot-strap terminal 1
7	POWER-GND	Power GND
8	STBY	Stand-by control terminal
9	FILTER	Ripple filter terminal
10	NF1	Feedback terminal 1
11	IN1	Input terminal 1
12	IN2	Input terminal 2
13	NF2	Feedback terminal 2
14	PRE-GND1	Small signal GND 1
15	PRE-GND2	Small signal GND 2

■ STK795-460 (X DRIVE ASSY : IC3200, IC3201)  
(Y DRIVE ASSY : IC2206, IC2214)

• PDP Pulse Module IC

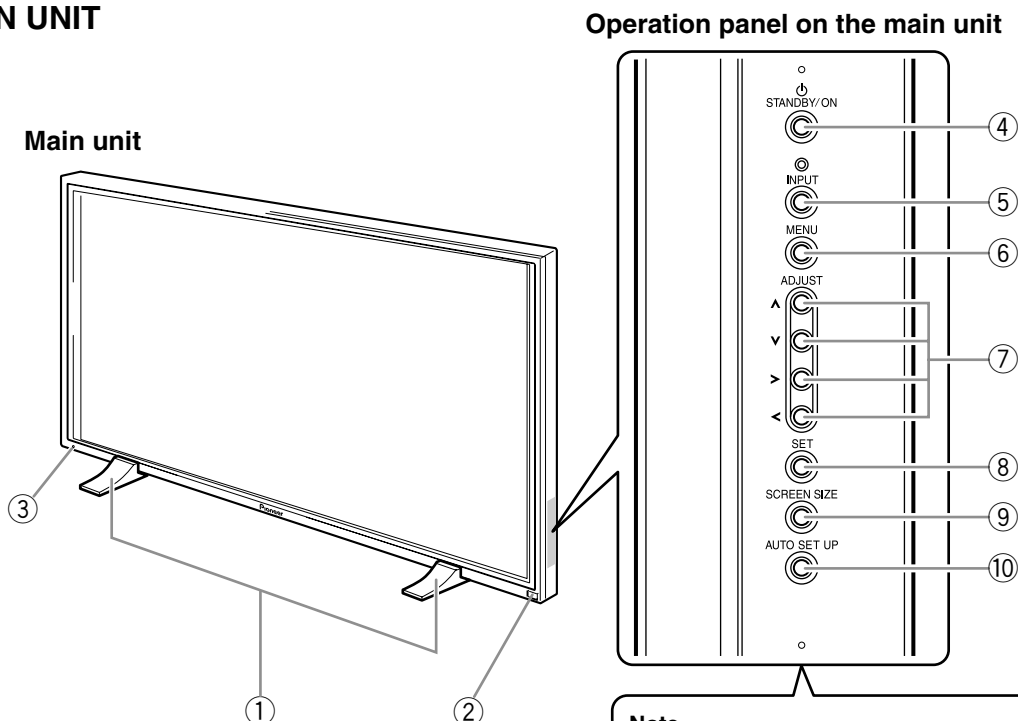
• Block Diagram



## 8. PANEL FACILITIES AND SPECIFICATIONS

### 8.1 PANEL FACILITIES

#### ■ MAIN UNIT



#### Note

When optional speakers have been connected, the operation panel on the main unit will not be operable.

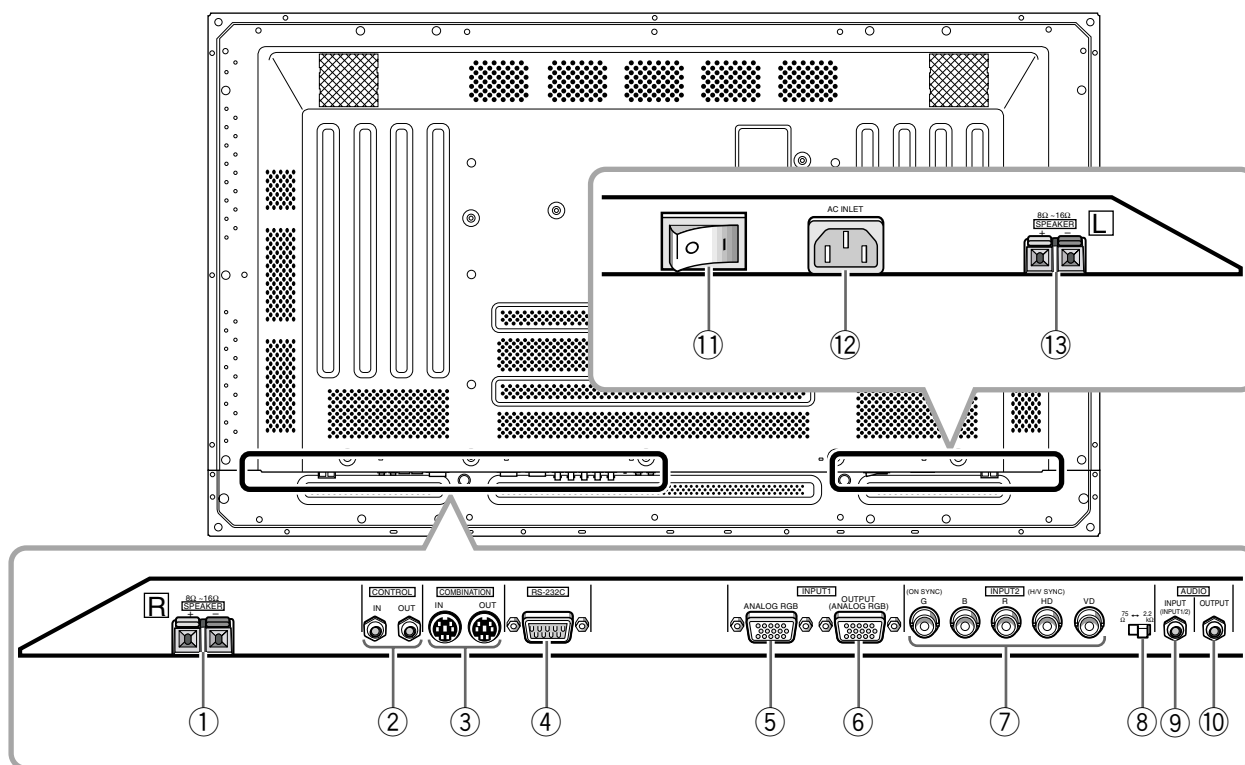
#### Main unit

- ① **Display stand**
- ② **Remote control sensor**  
Point the remote control toward the remote sensor to operate the unit.
- ③ **STANDBY/ON indicator**  
This indicator is red during standby mode, and turns to green when the unit is in the operation mode. Flashes green when Power-Management function is operating. The flashing pattern is also used to indicate error messages.

#### Operation panel on the main unit


- ④ **STANDBY/ON button**  
Press to put the display in operation or standby mode.
- ⑤ **INPUT button**  
Press to select input.
- ⑥ **MENU button**  
Press to open and close the on-screen menu.
- ⑦ **ADJUST (▲/▼/▶/◀) buttons**  
Use to navigate menu screens and to adjust various settings on the unit. Usage of cursor buttons within operations is clearly indicated in the on-screen display.
- ⑧ **SET button**  
Press to adjust or enter various settings on the unit.
- ⑨ **SCREEN SIZE button**  
Press to select the screen size.
- ⑩ **AUTO SET UP button**  
When using computer signal input, automatically sets the POSITION and CLOCK/PHASE to optimum values.

## ■ CONNECTION PANEL



### Plasma Display [PDP-433CMX/PDP-433MXE] Section

The plasma display is provided with 2 video input connectors, 1 video output connector, audio input/output jacks and speaker terminals.


There are also CONTROL IN/OUT jacks for connection of PIONEER components with the  mark.

When this video card is installed on a plasma display, an additional three sets of video input connectors are provided (total five), together with one additional video output connector (total two).

#### ① SPEAKER (R) terminal

For connection of an external speaker.  
Connect a speaker whose impedance is 8 -16 Ω.

#### ② CONTROL IN/OUT (monaural mini jacks)

For connection of PIONEER components that bear the  mark. Making CONTROL connection enables control of the plasma display as a component in a system.

#### ③ COMBINATION IN/OUT

**DO NOT MAKE ANY CONNECTIONS TO THESE TERMINALS.**

These terminals are used in the factory setup.

#### ④ RS-232C

**DO NOT MAKE ANY CONNECTIONS TO THIS TERMINAL.**

This terminal is used in the factory setup.

#### ⑤ INPUT1 (mini D-sub 15 pin)

For connection of components that have RGB or component output jacks such as a personal computer, DVD player, or external RGB decoder. Make sure that the connection made corresponds to the format of the signal output from the connected component.

#### ⑥ OUTPUT (INPUT1) (mini D-sub 15 pin)

Use the OUTPUT (INPUT1) connector to output the video signal to an external monitor or other component.

Note: The video signal will not be output from the OUTPUT (INPUT1) connector when the main power of this display is off or in standby mode.

#### ⑦ INPUT2 (BNC jacks)

For connection of components that have RGB or component output jacks such as a personal computer, DVD player, or external RGB decoder. Make sure that the connection made corresponds to the format of the signal output from the connected component.

#### ⑧ Synchronizing signal impedance selector switch

Depending on the connections made at INPUT2, it may be necessary to set this switch to match the output impedance of the connected component's synchronization signal.

When the output impedance of the component's synchronization signal is above 75 Ω, set this switch to the 2.2 kΩ position.

⑨ **AUDIO INPUT (Stereo mini jack)**

Use to obtain sound when INPUT1, INPUT2 or INPUT5 is selected.

Connect this jack to the audio output connector of the device connected to the plasma display's INPUT1 or INPUT2, or to the audio output connector of the device connected to the video card's INPUT5.

⑩ **AUDIO OUTPUT (Stereo mini jack)**

Use to output the audio of the selected source component connected to the plasma display to an AV amplifier or similar component.

⑪ **MAIN POWER switch**

Use to switch the main power of the plasma display on and off.

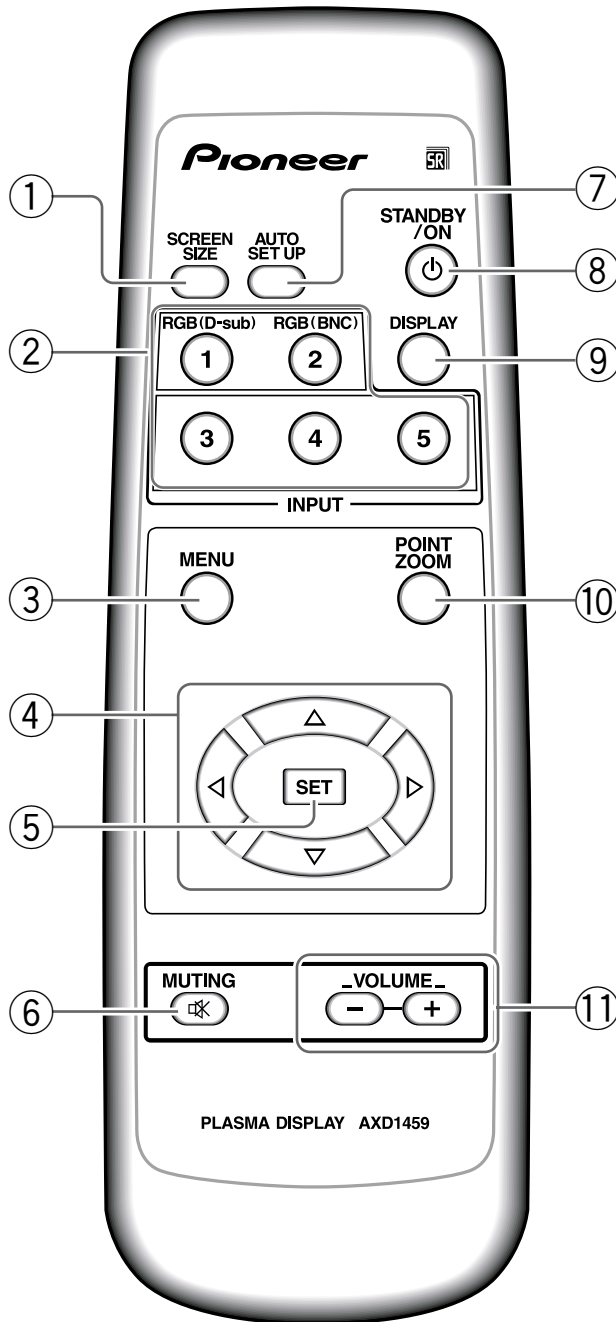
⑫ **AC INLET**

A power cable is furnished with the plasma display; connect one end of the power cable to this connector, and the other end to a standard AC power source.

⑬ **SPEAKER (L) terminal**

For connection of an external left speaker. Connect a speaker that has an impedance of 8 -16  $\Omega$ .

## ■ REMOTE CONTROL UNIT



- ① **SCREEN SIZE button**  
Press to select the screen size.
- ② **INPUT buttons**  
Use to select the input.
- ③ **MENU button**  
Press to open and close the on-screen menu.
- ④ **ADJUST (▲/▼/▶/◀) buttons**  
Use to navigate menu screens and to adjust various settings on the unit.  
Usage of cursor buttons within operations is clearly indicated at the bottom the on-screen menu display.
- ⑤ **SET button**  
Press to adjust or enter various settings on the unit.
- ⑥ **MUTING button**  
Press to mute the volume.
- ⑦ **AUTO SET UP button**  
When using computer signal input, automatically sets the POSITION and CLOCK/ PHASE to optimum values.
- ⑧ **STANDBY/ON button**  
Press to put the unit in operation or standby mode.
- ⑨ **DISPLAY button**  
Press to view the unit's current input and setup mode.
- ⑩ **POINT ZOOM button**  
Use to select and enlarge one part of the screen.
- ⑪ **VOLUME (+/-) buttons**  
Use to adjust the volume.

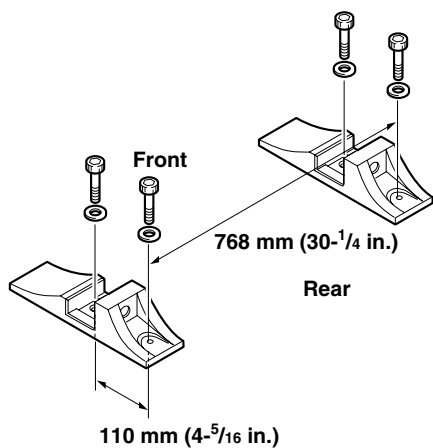


## ■ INSTALLATION OF THE UNIT

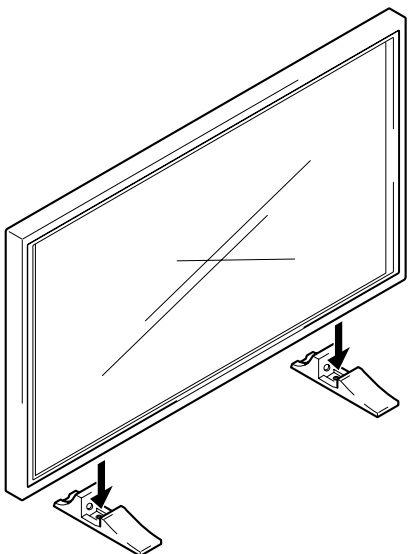
### Installation using the supplied display stand

Be sure to fix the supplied stand to the installation surface.  
Use commercially available M8 bolts that are 25 mm longer than the thickness of the installation surface.

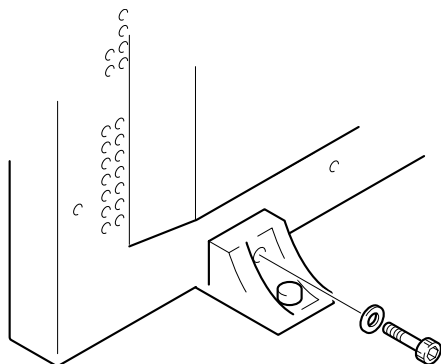
- 1 Fix the supplied stand to the installation surface at each of the 4 prepared holes using commercially available M8 bolts .



- 2 Set this unit in the stand.



- 3 Fix this unit using the supplied washer and bolt.



Use a 6 mm hex wrench to bolt them.

### ⚠ CAUTION

Because this unit weighs about 88 lbs 3 oz (about 30 kg) and the lack of depth makes it fairly unstable, please use 2 people or more when packing, carrying or installing.

### Installation using the optional PIONEER stand or installation bracket

- Please be sure to request installation or mounting of this unit or the installation bracket by an installation specialist or the dealer where purchased.
- When installing, be sure to use the bolts provided with the stand or installation bracket.
- For details concerning installation, please refer to the instruction manual provided with the stand or installation bracket.

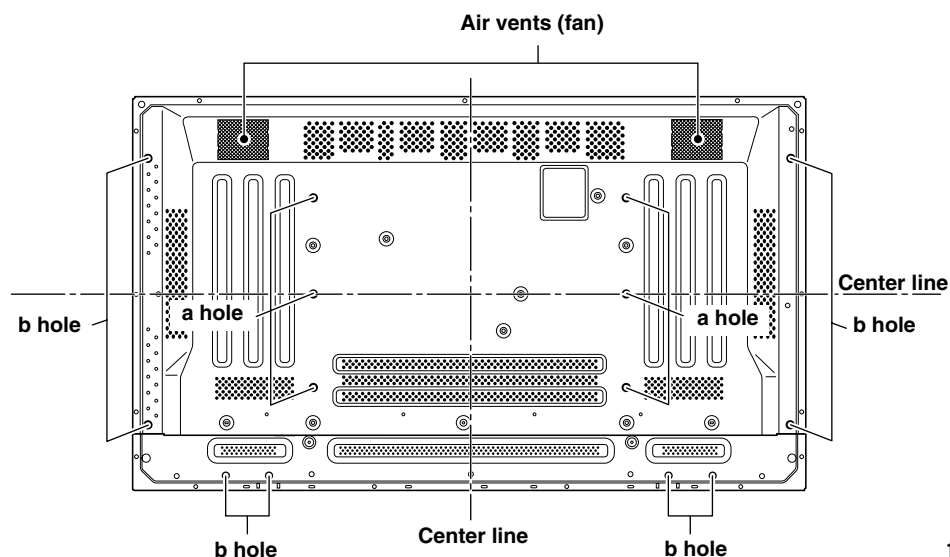
### Installation using accessories other than the PIONEER stand or installation bracket (sold separately)

- When possible, please install using parts and accessories manufactured by PIONEER. PIONEER will not be held responsible for accident or damage caused by the use of parts and accessories manufactured by other companies.
- For custom installation, please consult the dealer where the unit was purchased, or a qualified installer.

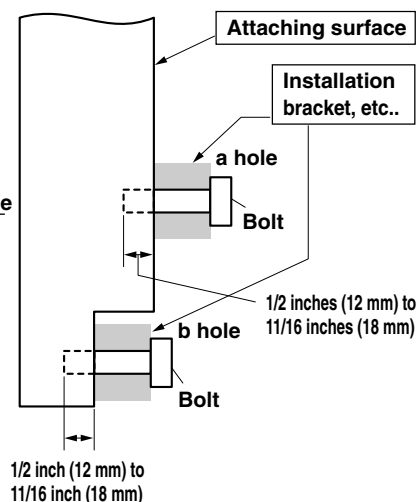
### Wall-mount installation of the unit

This unit has been designed with bolt holes for wall-mount installation, etc.. The installation holes that can be used are shown in the diagram below.

- Be sure to attach in 4 or more locations above and below, left and right of the center line.
- Use bolts that are long enough to be inserted 1/2 inch (12 mm) to 11/16 inch (18 mm) into the main unit from the attaching surface for both a holes and b holes. Refer to the side view diagram below.
- As this unit is constructed with glass, be sure to install it on a flat, unwarped surface.



Rear view diagram



Side view diagram

### CAUTION

To avoid malfunction, overheating of this unit, and possible fire hazard, make sure that the vents on the main unit are not blocked when installing. Also, as hot air is expelled from the air vents, be careful of deterioration and dirt build up on rear surface wall, etc..

### CAUTION

Please be sure to use an M8 (Pitch = 1.25 mm) bolt. (Only this size bolt can be used.)

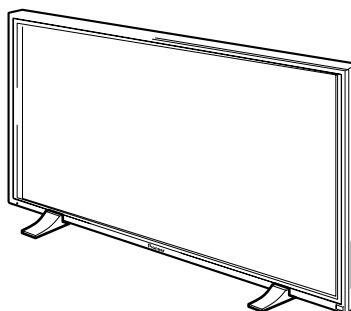
### CAUTION

Because this unit weighs about 88 lbs 3 oz (about 40 kg) and the lack of depth makes it fairly unstable, please use 2 people or more when packing, carrying or installing.

### CAUTION

This unit incorporates a thin design. To ensure safety if vibrated or shaken, please be sure to take measures to prevent the unit from tipping over.

# Service Manual



ORDER NO.  
**ARP3093**

PLASMA DISPLAY

# PDP-503CMX PDP-503MXE

VIDEO CARD

# PDA-5002

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model			Power Requirement	Remarks
	PDP-503CMX	PDP-503MXE	PDA-5002		
LUCB	○	—	—	AC100 - 120V	
YVLDK	—	○	—	AC100 - 240V	
BDK/WL	—	—	○	—————	


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# 1. SAFETY INFORMATION

**This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.**

**Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.**



## WARNING

**This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.**

**Health & Safety Code Section 25249.6 – Proposition 65**



## NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols  (fast operating fuse) and/or  (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

## REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible  (fusible de type rapide) et/ou  (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

## 1.1 SAFETY PRECAUTIONS

**NOTICE :**Comply with all cautions and safety related notes located on or inside the cabinet and on the chassis.

The following precautions should be observed :

1. When service is required, even though the PDP UNIT an isolation transformer should be inserted between the power line and the set in safety before any service is performed.
2. When replacing a chassis in the set, all the protective devices must be put back in place, such as barriers, nonmetallic knobs, adjustment and compartment covershields, isolation resistor-capacitor, etc.
3. When service is required, observe the original lead dress. Extra precaution should be taken to assure correct lead dress in the high voltage circuitry area.
4. Always use the manufacture's replacement components. Especially critical components as indicated on the circuit diagram should not be replaced by other manufacture's. Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.
5. Before returning a serviced set to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the set by the manufacture has become defective, or inadvertently defeated during servicing. Therefore, the following checks should be performed for the continued protection of the customer and service technician.
6. Perform the following precautions against unwanted radiation and rise in internal temperature.
  - Always return the internal wiring to the original styling.
  - Attach parts (Gasket, Ferrite Core, Ground, Rear Cover, Shield Case etc.) surely after disassembly.
7. Perform the following precautions for the PDP panel.
  - When the front case is removed, make sure nothing hits the panel face, panel corner, and panel edge (so that the glass does not break).
  - Make sure that the panel vent does not break. (Check that the cover is attached.)
  - Handle the FPC connected to the panel carefully. Twisting or pulling the FPC when connecting it to the connector will cause it to peel off from the panel.
8. Pay attention to the following.
  - Be sure to wire the fan. If the fan does not work, the temperature will rise and cause the protection circuit to operate.
  - When the front case is removed, infrared ray is radiated and may disturb reception of the remote control unit.
  - Pay extreme caution when the front case and rear panel are removed because this may cause a high risk of disturbance to TVs and radios in the surrounding.

## Leakage Current Cold Check

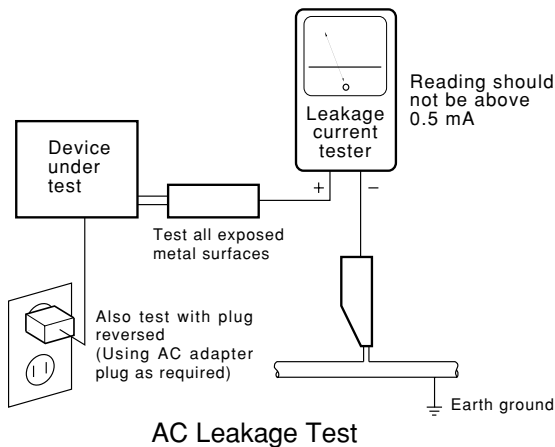
With the AC plug removed from an AC power source, place a jumper across the two plug prongs. Turn the AC power switch on. Using an insulation tester (DC 500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (input/output terminals, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistor reading of  $0.3M\Omega$  and a maximum resistor reading of  $5M\Omega$ . Any resistor value below or above this range indicates an abnormality which requires corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

## Leakage Current Hot Check

Plug the AC line cord directly into an AC power source (do not use an isolation transformer for this check).

Turn the AC power switch on.

Using a "Leakage Current Tester (Simpson Model 229 equivalent)", measure for current from all exposed metal parts of the cabinet (input/output terminals, screwheads, metal overlays, control shaft, etc.), particularly any exposed metal part having a return path to the chassis, to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed 0.5mA.



**ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE SET TO THE CUSTOMER.**

## 1.2 PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in PIONEER set have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚡ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

## 1.3 CHARGED SECTION AND HIGH VOLTAGE GENERATING POINT

### ■ Charged Section

The places where the commercial AC power is used without passing through the power supply transformer.

If the places are touched, there is a risk of electric shock. In addition, the measuring equipment can be damaged if it is connected to the GND of the charged section and the GND of the non-charged section while connecting the set directly to the commercial AC power supply. Therefore, be sure to connect the set via an insulated transformer and supply the current.

1. AC Power Cord
2. AC Inlet with Filter
3. Power Switch (S1)
4. Fuse (In the SW POWER SUPPLY Module)
5. STB Transformer and Converter Transformer  
(In the SW POWER SUPPLY Module)
6. Other primary side of the SW POWER SUPPLY Module

### ■ High Voltage Generating Point

The places where voltage is 100V or more except for the charged places described above. If the places are touched, there is a risk of electric shock.

1. SW POWER SUPPLY Module ..... (225V)
2. X DRIVE Assy ..... (–300V to 225V)
3. Y DRIVE Assy ..... (355V)
4. SCAN (A) Assy ..... (355V)
5. SCAN (B) Assy ..... (355V)
6. X CONNECTOR (A) Assy ..... (–300V to 225V)
7. X CONNECTOR (B) Assy ..... (–300V to 225V)

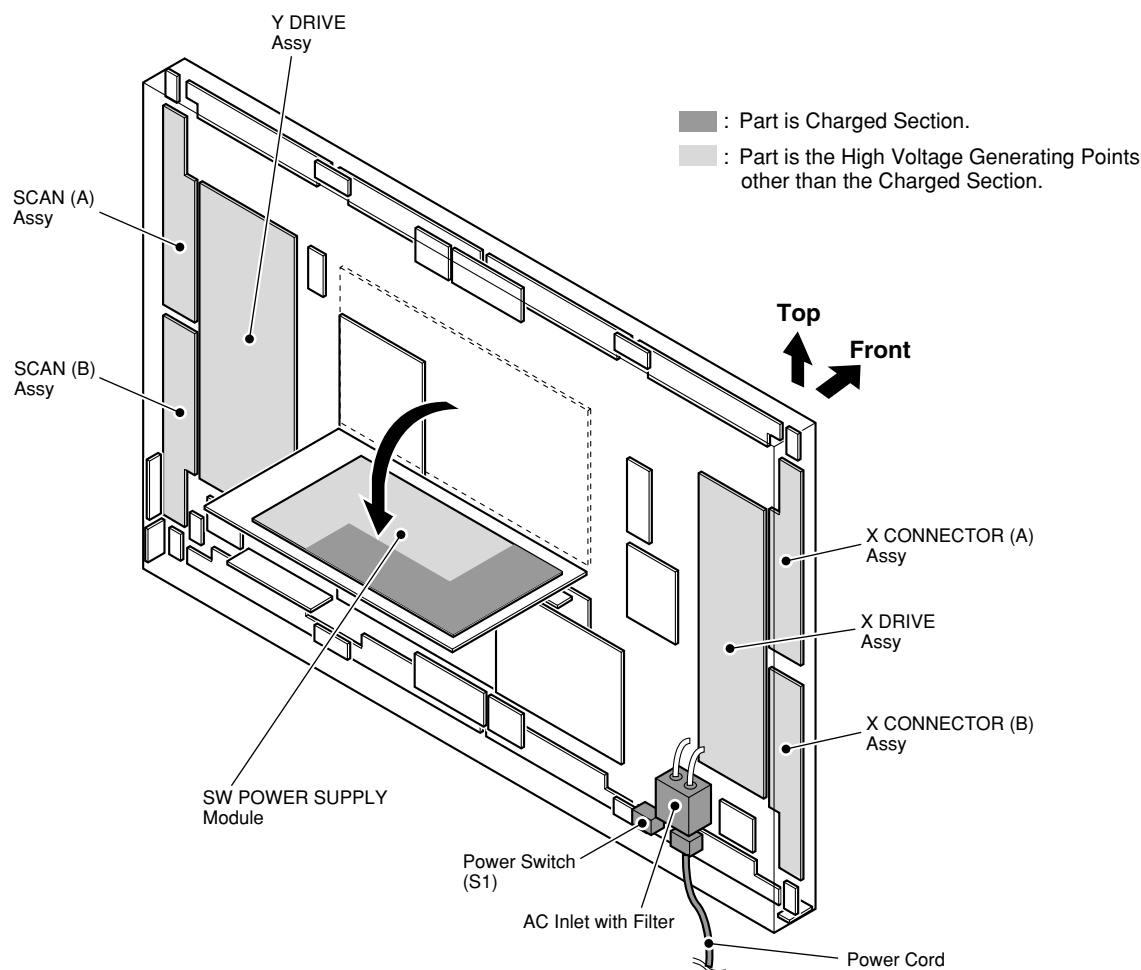


Fig.1 Charged Section and High Voltage Generating Point (Rear View)

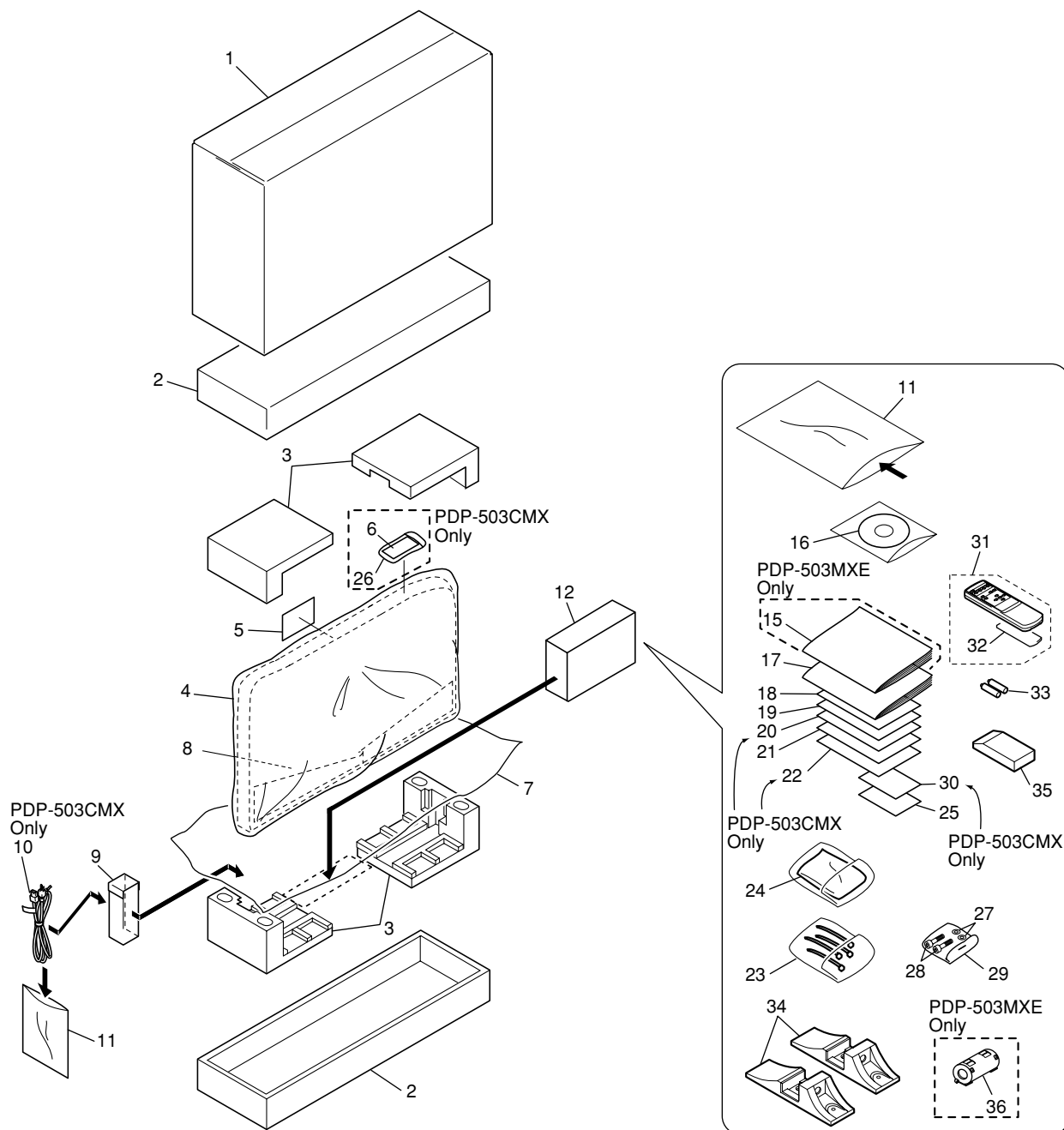


## 2. EXPLODED VIEWS AND PARTS LIST

NOTES: ● Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.  
 ● The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.  
 ● Screws adjacent to ▼ mark on the product are used for disassembly.

### 2.1 PLASMA DISPLAY (PDP-503CMX and PDP-503MXE)

#### 2.1.1 PACKING





## (1) PACKING PARTS LIST

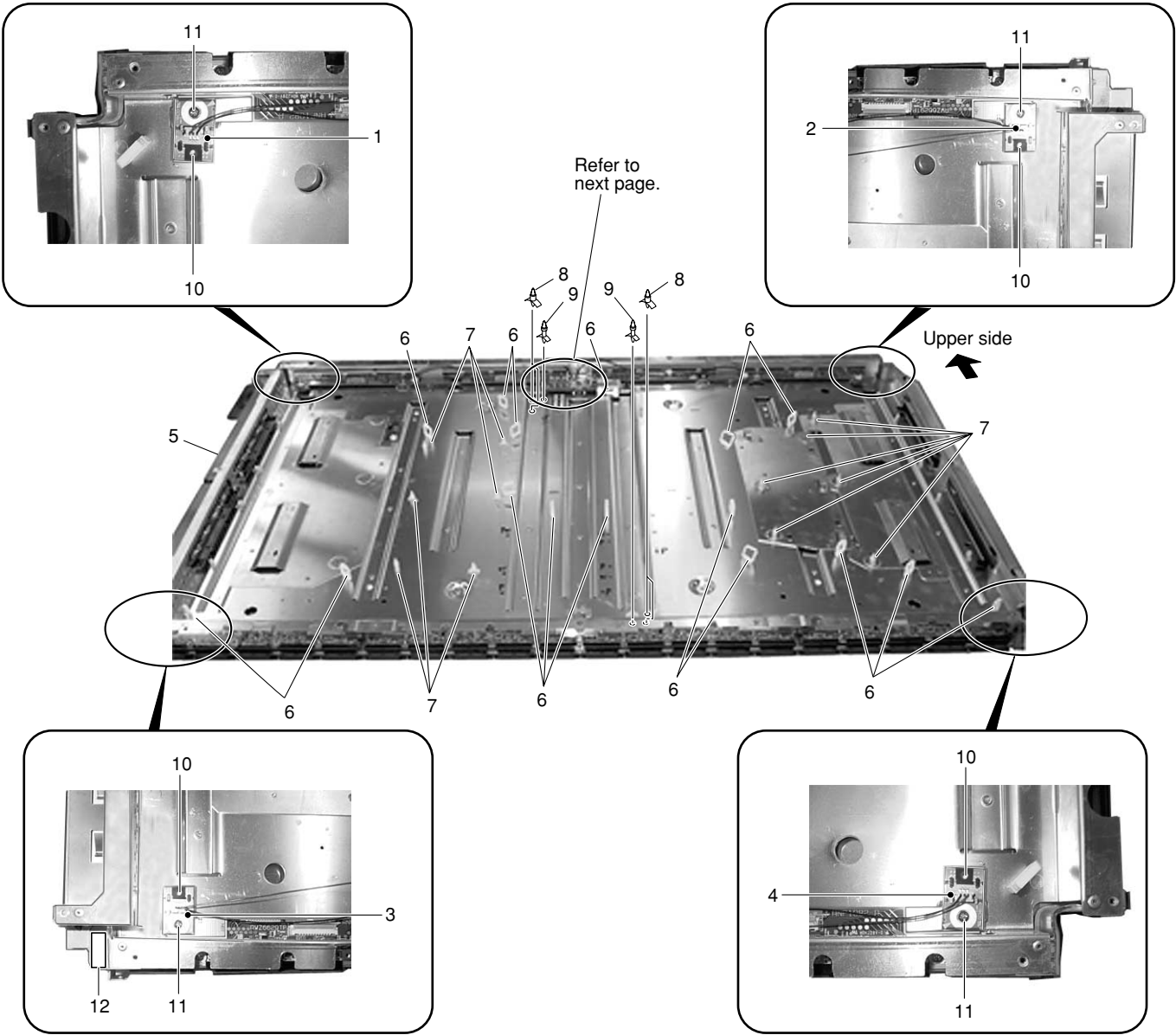
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Upper Carton	See Contrast table (2)		20	Plasma Caution Sheet	See Contrast table (2)
	2	Under Carton	AHD3037		21	Plasma Caution Sheet	See Contrast table (2)
	3	Pad	AHA2280		22	Caution Sheet	See Contrast table (2)
	4	Mirror Mat	AHG1284		23	Binder Assy (Speed Clamp × 2, Bead Band × 2)	AEC1758
	5	Caution Sheet	ARM1201		24	Cleaning Cloth (for Wiping Front Panel)	AED1197
NSP	6	Warranty Card	See Contrast table (2)	NSP	25	Warranty Card	ARY1102
	7	Polyethylene Sheet	AHG1302	NSP	26	Vinyl Pouch	See Contrast table (2)
	8	Front Sheet	AHB1241		27	Washer	WB80FZB
△	9	Cord Case	AHC1037		28	Hex Hole Bolt	SMZ80H400FZB
	10	Power Cord	See Contrast table (2)		29	Vinyl Bag	AHG-064
	11	Vinyl Bag	AHG1310		30	Caution Sheet	See Contrast table (2)
	12	Accessory Case	AHC1036		31	Remote Control Unit	AXD1459
	13	•••••			32	Battery Cover	AZN2462
	14	•••••		NSP	33	Dry Cell Battery (R6P, AA)	AEX1026
	15	Operating Instructions (Spanish/Italian/Dutch)	See Contrast table (2)		34	Display Stand	AMR3264
	16	CD-ROM (information files)	AEX1027		35	Remote Control Unit Holder	AMR3268
	17	OPERating Instructions	See Contrast table (2)		36	Ferrite Core	See Contrast table (2)
	18	Caution Sheet	ARM1200				
	19	Caution Sheet	ARM1194				

## (2) CONTRAST TABLE

PDP-503CMX/LUCB and PDP-503MXE/YVLDK are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			PDP-503CMX	PDP-503MXE	
			LUCB	YVLDK	
NSP △	1	Upper Carton	AHD3094	AHD3097	
	6	Warranty Card	ARY1093	Not used	
	10	Power Cord	ADG1178	Not used	
	15	Operating Instructions (Spanish/Italian/Dutch)	Not used	ARC1503	
	17	Operating Instructions (Japanese/English/French)	ARD1042	Not used	
NSP	17	Operating Instructions (English/French/German)	Not used	ARE1360	
	20	Plasma Caution Sheet	ARM1145	Not used	
	21	Plasma Caution Sheet	ARM1147	ARM1149	
	22	Caution Sheet	ARM1176	Not used	
	26	Vinyl Pouch	AHG-195	Not used	
	30	Caution Sheet	ARM1203	Not used	
	36	Ferrite Core	Not used	ATX1031	

2.1.2 UNDER LAYER SECTION (1)



● UNDER LAYER SECTION (1) PARTS LIST

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	CLAMP A Assy	AWZ6650		6	Wire Saddle	AEC1878
	2	CLAMP B Assy	AWZ6651		7	Circuit Board Spacer	AEC1872
	3	CLAMP C Assy	AWZ6652		8	Circuit Board Spacer	AEC1873
	4	CLAMP D Assy	AWZ6653	NSP	9	PCB Spacer	AEC1253
	5	Service Panel Assy	AWU1040		10	Locking Card Spacer	AEC1736
					11	Screw	ABA1301
					12	V Cushion	AED1205

## ■ Caution in Replacement of Panel Chassis (50) Assy

Service Panel Assy (AWU1040) is all common use parts of for business, public use and module.  
Supply it by the state that installed Circuit Board Spacer (AEC1872) and Wire Saddle (AEC1878) as follows.  
Therefore need to remove it in accordance with model.

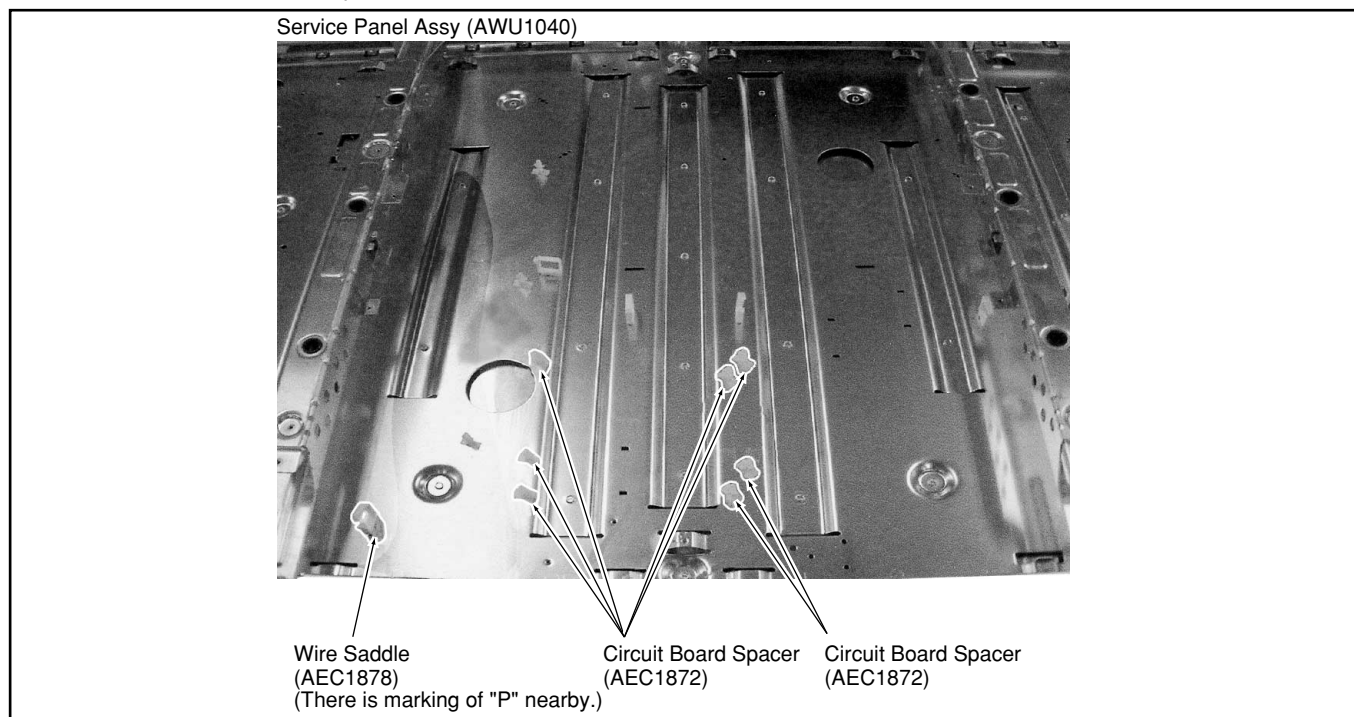
Confirm character carved a seal near the parts, and remove it.

P : Public exclusive use

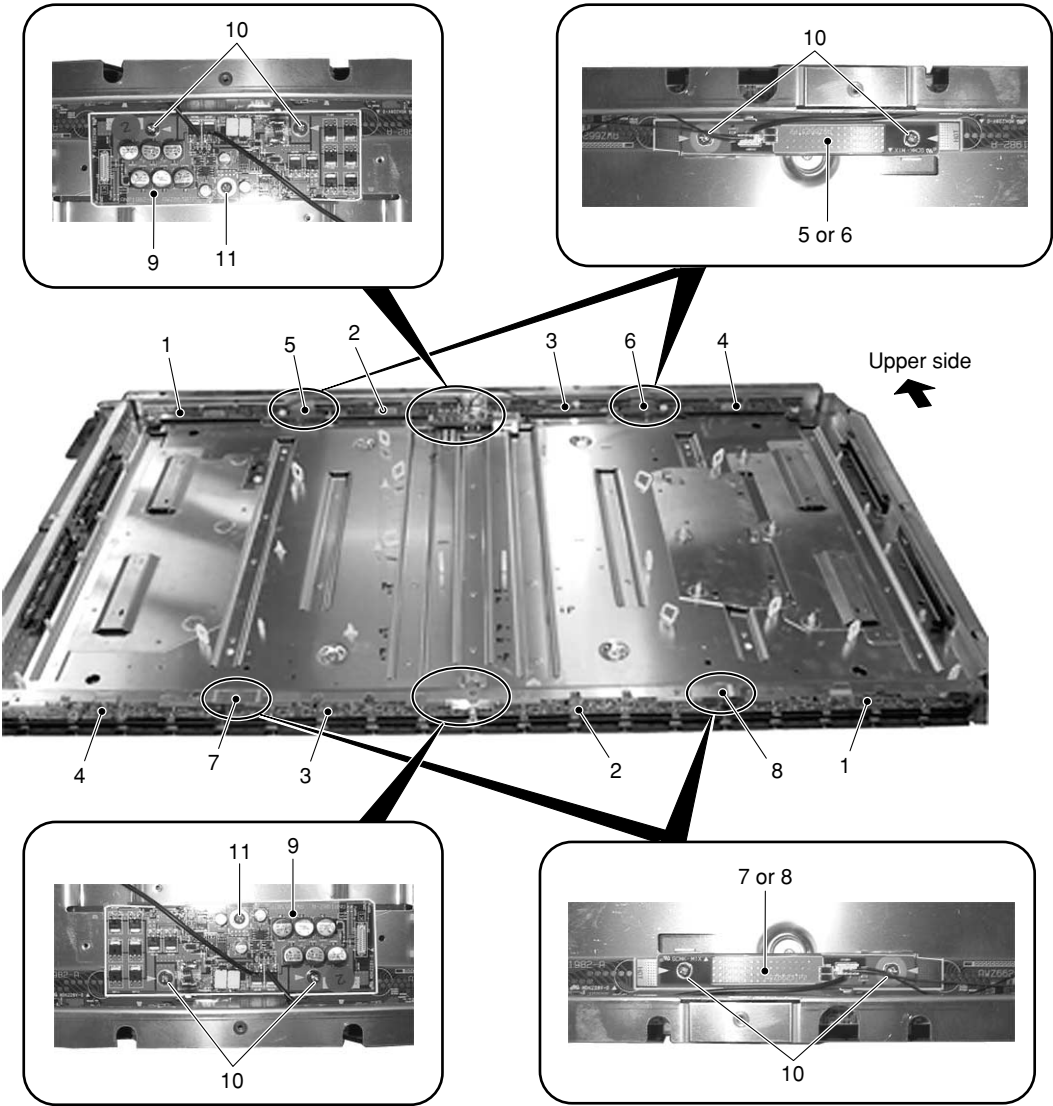
W : Module exclusive use

PW : Common use of public use and module

\* In case of this unit, all the parts carved a seal of character removes it.



2.1.3 UNDER LAYER SECTION (2)

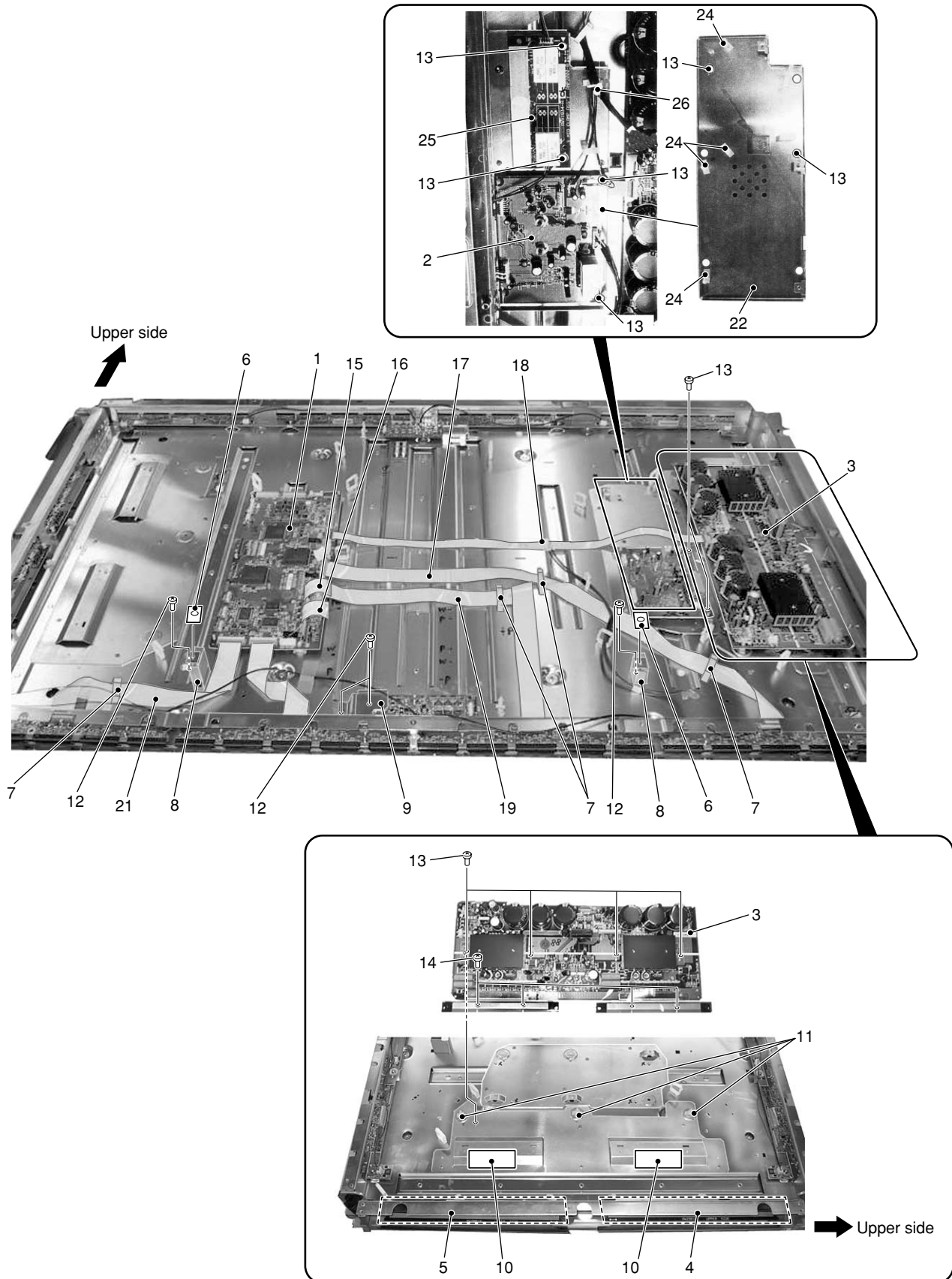


● UNDER LAYER SECTION (2) PARTS LIST

Mark	No.	Description	Part No.
	1	ADR CONNECT A Assy	AWZ6626
	2	ADR CONNECT B Assy	AWZ6627
	3	ADR CONNECT C Assy	AWZ6628
	4	ADR CONNECT D Assy	AWZ6629
	5	BRIDGE A Assy	AWZ6620

Mark	No.	Description	Part No.
	6	BRIDGE B Assy	AWZ6621
	7	BRIDGE C Assy	AWZ6622
	8	BRIDGE D Assy	AWZ6623
	9	RESONANCE Assy	AWZ6630
	10	Screw	ABA1301
	11	Screw	VBB30P100FNI

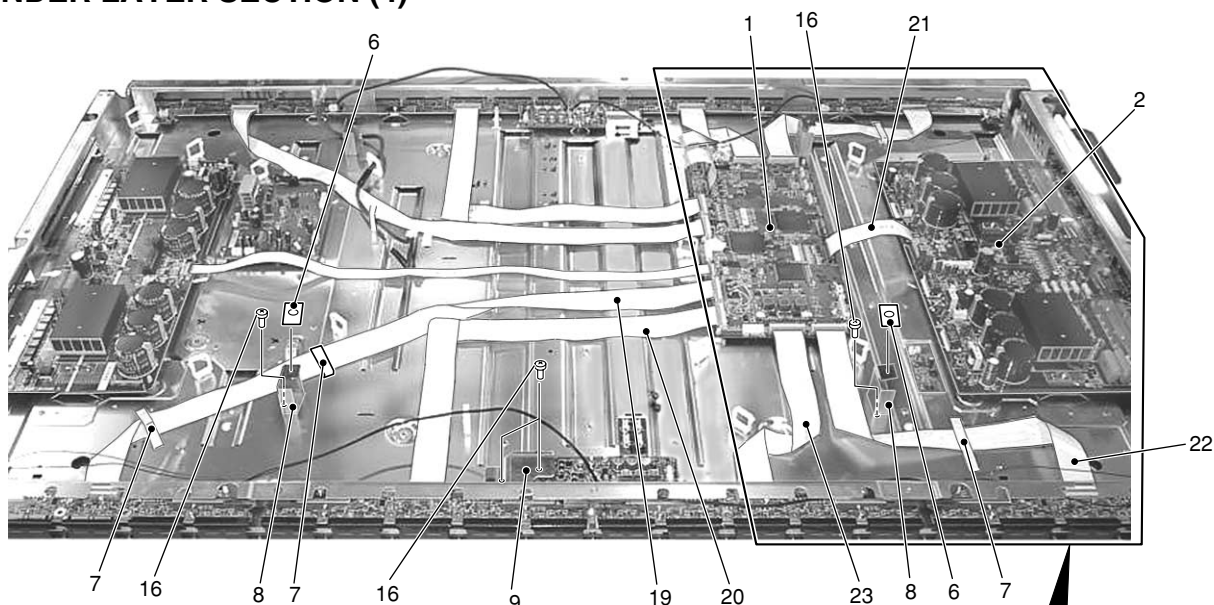
## 2.1.4 UNDER LAYER SECTION (3)



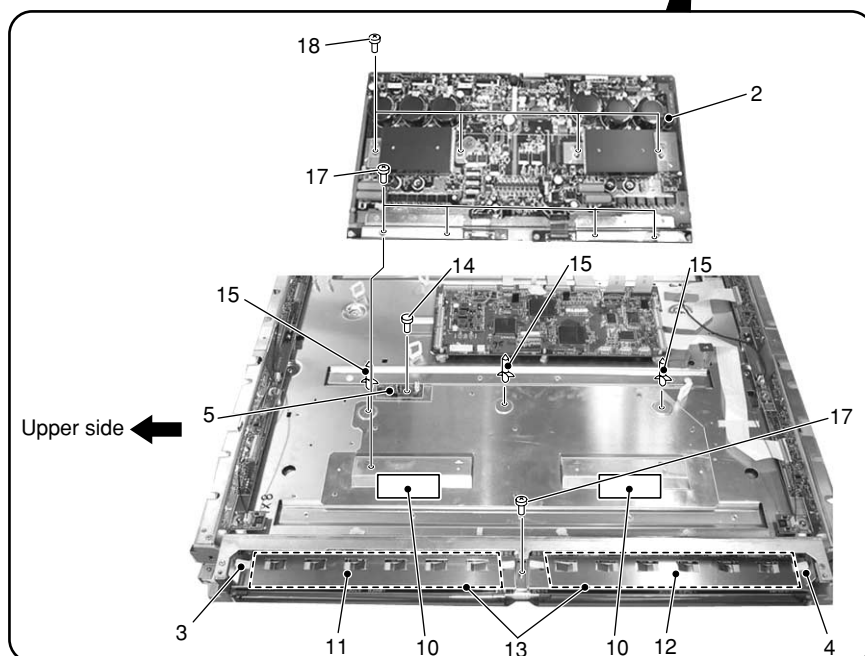
## ● UNDER LAYER SECTION (3) PARTS LIST

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	DIGITAL VIDEO Assy	AWV1903		16	J202 Flexible Flat Cable	ADD1183
	2	MX AUDIO Assy	AWZ6644		17	J209 Flexible Flat Cable	ADD1191
	3	X DRIVE Assy	AWV1901		18	J204 Flexible Flat Cable	ADD1196
	4	X CONNECTOR (A) Assy	AWZ6618		19	J210 Flexible Flat Cable	ADD1190
	5	X CONNECTOR (B) Assy	AWZ6619		20	J211 Flexible Flat Cable	ADD1186
	6	Insulation Sheet	AMR3263		21	J212 Flexible Flat Cable	ADD1188
	7	Flat Clamp	AEC1879	NSP	22	Holder	ANG2498
NSP	8	Metal Fittings	ANG2464		23	•••••	
NSP	9	Heat Sink	ANH1594		24	Circuit Board Spacer	AEC1872
	10	Coil Silicone Sheet	AEH1048		25	V MID CLAMP Assy	AWV1934
	11	Circuit Board Spacer	AEC1872		26	Niplocker	BEC1136
	12	Screw	ABZ30P060FMC				
	13	Screw	VBB30P100FNI				
	14	Screw	PMB30P060FNI				
	15	J201 Flexible Flat Cable	ADD1183				

## 2.1.5 UNDER LAYER SECTION (4)



↓  
Upper side

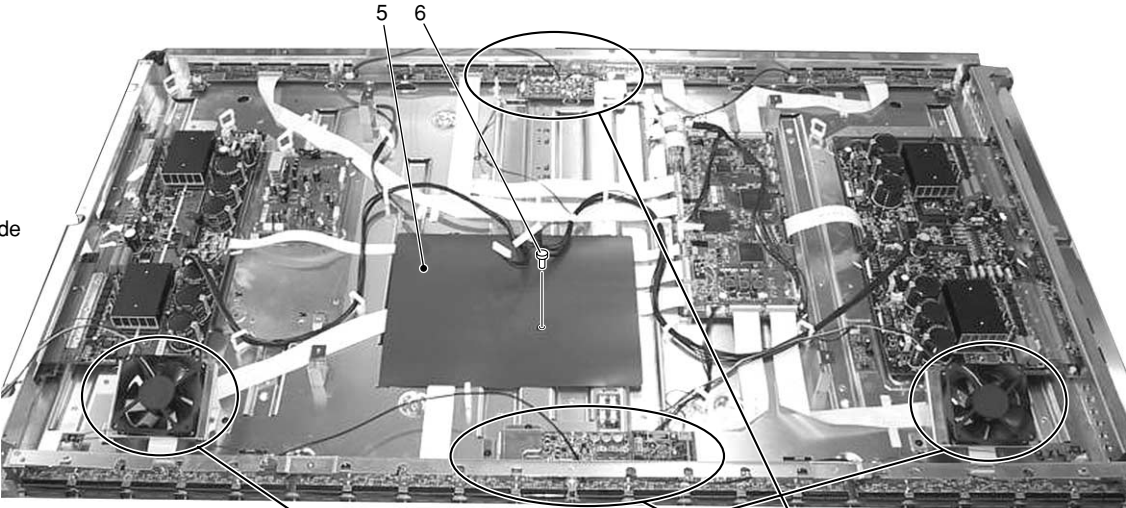


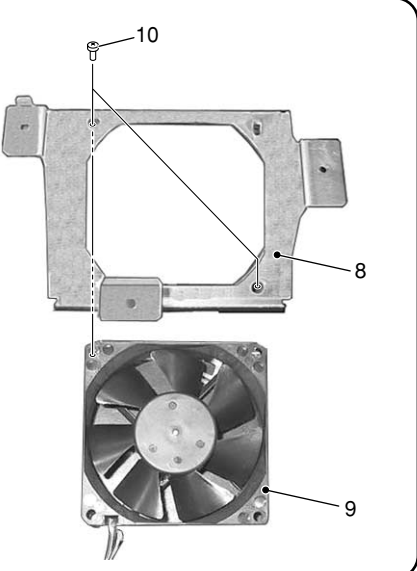
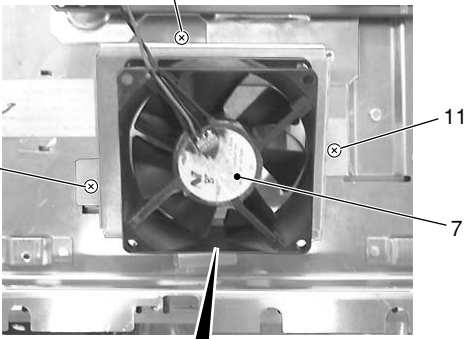
### ● UNDER LAYER SECTION (4) PARTS LIST

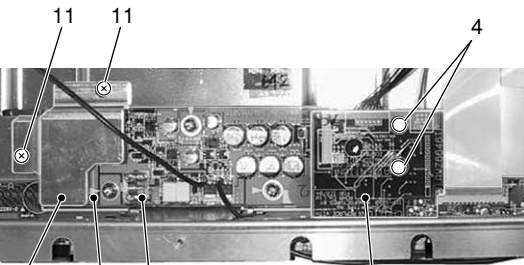
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	DIGITAL VIDEO Assy	AWV1903		11	Scan IC Spring (L)	ABK1026
	2	Y DRIVE Assy	AWZ6645		12	Scan IC Spring (R)	ABK1027
	3	SCAN (A) Assy	AWZ6616		13	Scan Insulation Sheet	AMR3271
	4	SCAN (B) Assy	AWZ6617		14	Rivet	BEC1066
	5	THERMAL SENSOR Assy	AWZ6639		15	Circuit Board Spacer	AEC1872
	6	Insulation Sheet	AMR3263		16	Screw	ABZ30P060FMC
	7	Flat Clamp	AEC1879		17	Screw	PMB30P060FNI
	8	Metal Fittings	ANG2464		18	Screw	VBB30P100FNI
	9	Heat Sink	ANH1594		19	J208 Flexible Flat Cable	ADD1191
	10	Coil Silicone Sheet	AEH1048		20	J207 Flexible Flat Cable	ADD1190
					21	J203 Flexible Flat Cable	ADD1184
					22	J205 Flexible Flat Cable	ADD1189
					23	J206 Flexible Flat Cable	ADD1187

2.1.6 UNDER LAYER SECTION (5)

Upper side







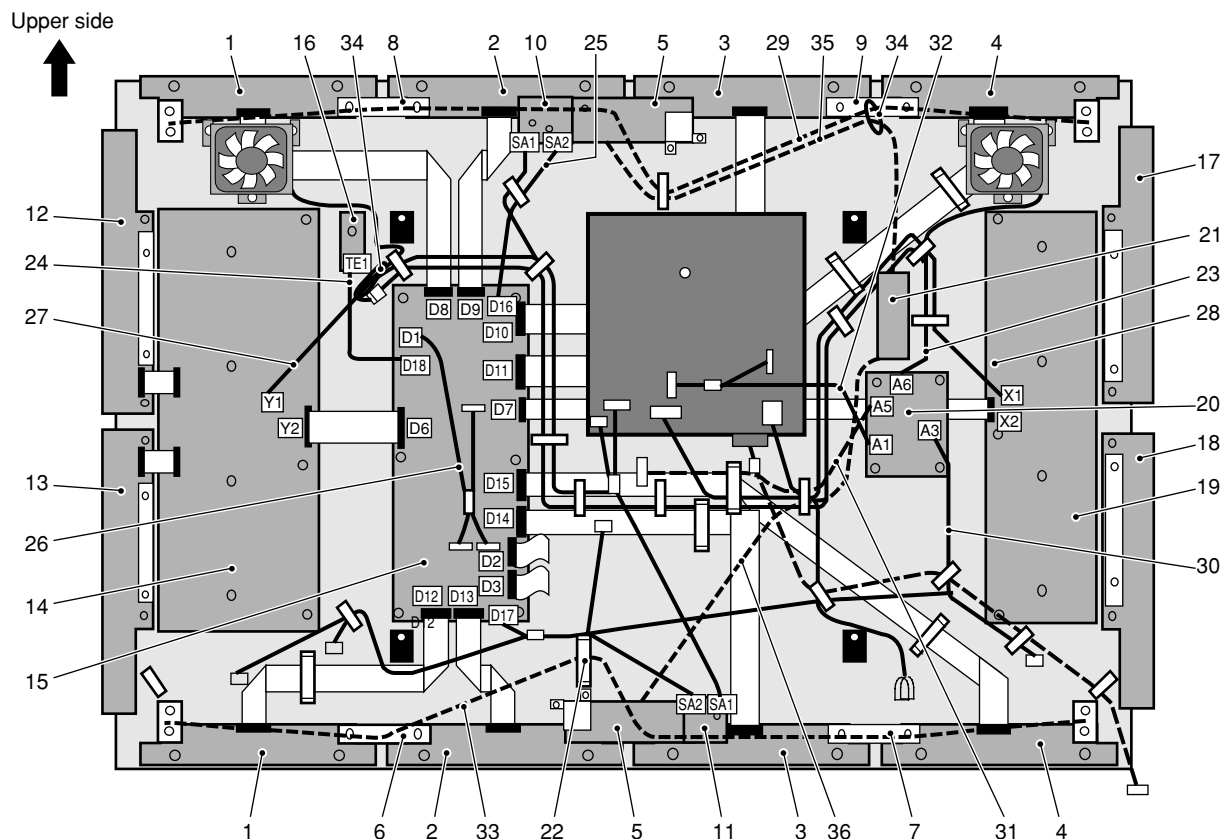
2 (Upper Side)  
3 (Bottom Side)

● UNDER LAYER SECTION (5) PARTS LIST

Mark	No.	Description	Part No.
	1	RESONANCE Assy	AWZ6630
	2	SUB ADDRESS A Assy	AWZ6646
	3	SUB ADDRESS B Assy	AWZ6647
	4	Circuit Board Spacer	AEC1873
	5	Power Sheet	AMR3291
	6	Rivet	BEC1066
	7	Fan Label	AAX2785
NSP	8	Fan Metal	ANG2465
	9	Fan Motor	AXM1040
	10	Screw	PPZ50P100FZK
NSP	11	Screw	ABZ30P060FMC
	12	Heatsink	ANH1594
	13	Silicone Sheet	AEH1039



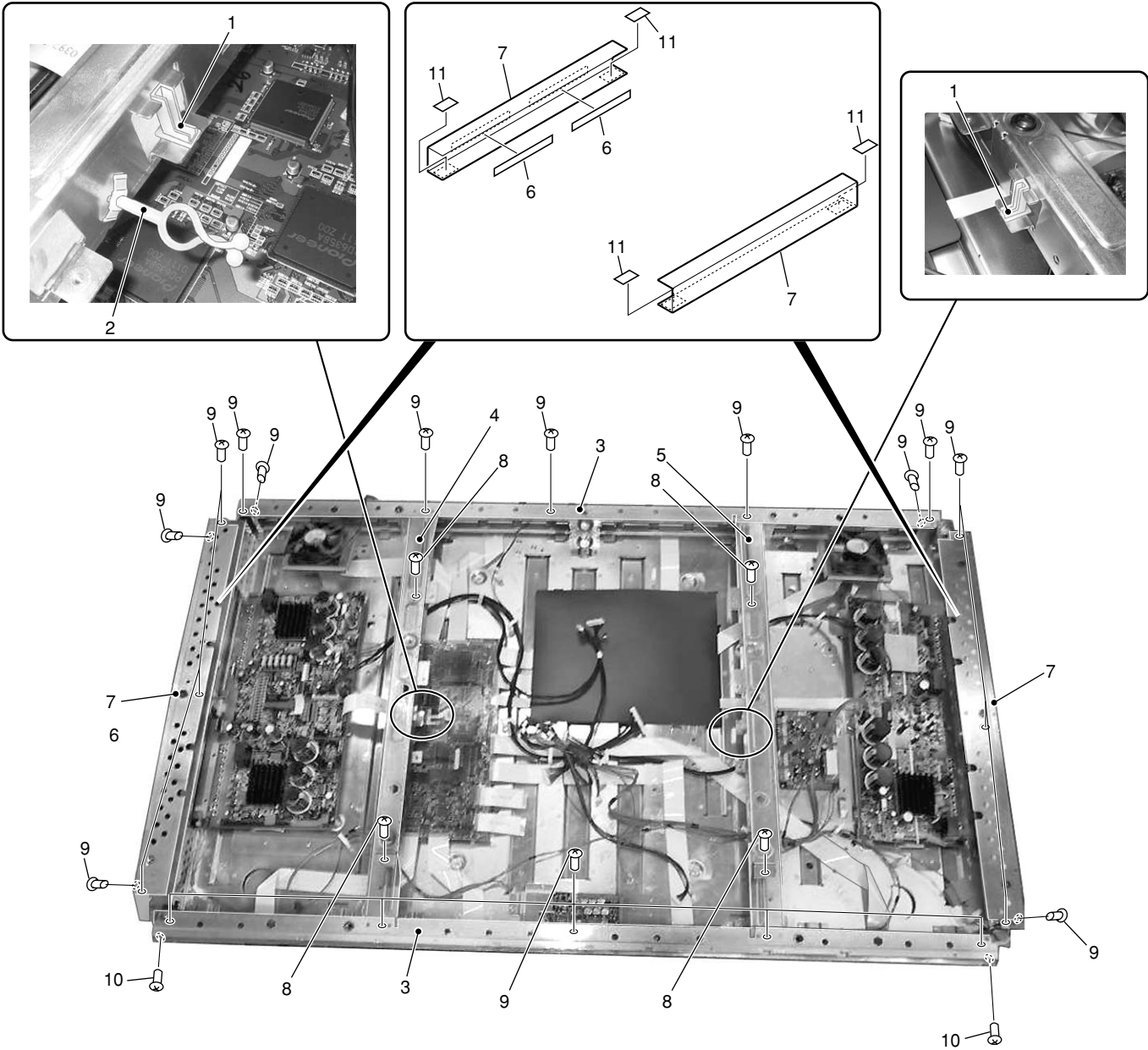
## 2.1.7 UNDER LAYER SECTION (6)



## ● UNDER LAYER SECTION (6) PARTS LIST

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	ADR CONNECT A Assy	AWZ6626		21	V MID CLAMP Assy	AWV1934
	2	ADR CONNECT B Assy	AWZ6627		22	Flat Clamp	AEC1879
	3	ADR CONNECT C Assy	AWZ6628		23	J115 3P Housing Wire	ADX2705
	4	ADR CONNECT D Assy	AWZ6629		24	J110 3P Housing Wire	ADX2704
	5	RESONANCE Assy	AWZ6630		25	J108 8P Housing Wire	ADX2701
	6	BRIDGE A Assy	AWZ6620		26	J101 Wire F	ADX2695
	7	BRIDGE B Assy	AWZ6621		27	J102 Wire E	ADX2694
	8	BRIDGE C Assy	AWZ6622		28	J103 13P Housing Wire	ADX2700
	9	BRIDGE D Assy	AWZ6623		29	J116 4P Housing SP Wire	ADX2725
	10	SUB ADDRESS A Assy	AWZ6646		30	J109 Wire G	ADX2696
	11	SUB ADDRESS B Assy	AWZ6647		31	J111 Wire I	ADX2698
	12	SCAN (A) Assy	AWZ6616		32	J104 Wire H	ADX2697
	13	SCAN (B) Assy	AWZ6617		33	J117 4P Housing SP Wire	ADX2725
	14	Y DRIVE Assy	AWZ6645		34	Binder	AEC-093
	15	DIGITAL VIDEO Assy	AWV1903		35	J118 5P Housing Wire	ADX2754
	16	THERMAL SENSOR Assy	AWZ6639		36	J119 5P Housing Wire	ADX2755
	17	X CONNECTOR (A) Assy	AWZ6618				
	18	X CONNECTOR (B) Assy	AWZ6619				
	19	X DRIVE Assy	AWV1901				
	20	MX AUDIO Assy	AWZ6644				

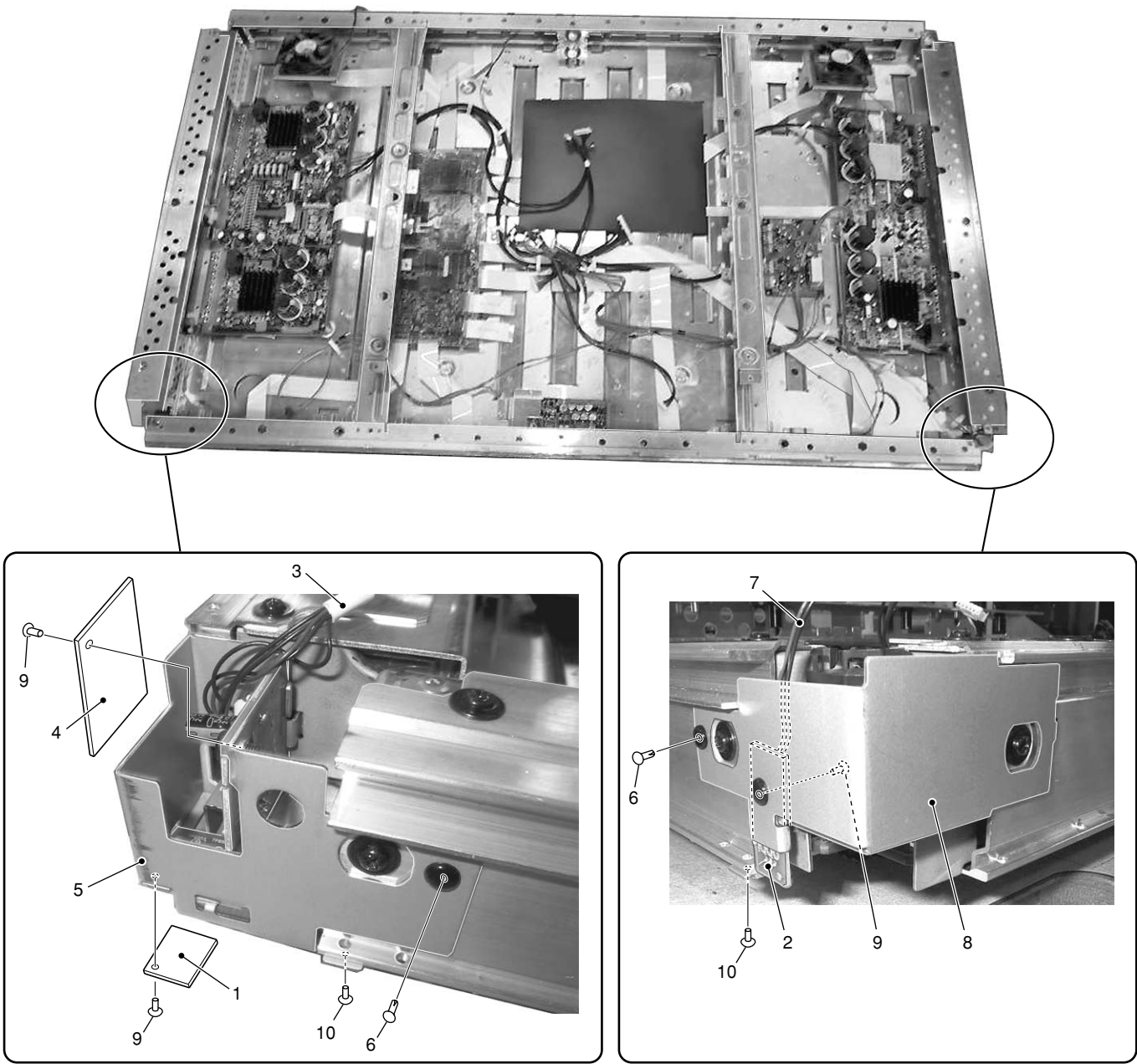
2.1.8 MIDDLE LAYER SECTION (1)



● MIDDLE LAYER SECTION (1) PARTS LIST

Mark	No.	Description	Part No.
	1	Card Corner Holder	BEC1144
	2	Niplocker	BEC1136
NSP	3	Front Chassis H	ANA1683
NSP	4	Sub Frame L	ANG2455
NSP	5	Sub Frame R	ANG2456
	6	FPC Cushion	AEB1370
NSP	7	Front Chassis V	ANA1661
	8	Screw	ABA1283
	9	Screw	ABA1294
	10	Screw	BMZ30P060FMC
	11	V Cushion	AED1205

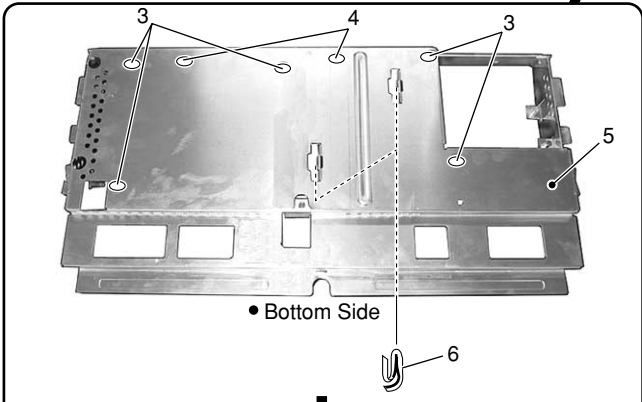
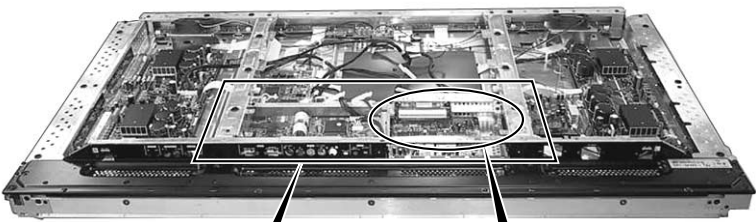
2.1.9 MIDDLE LAYER SECTION (2)



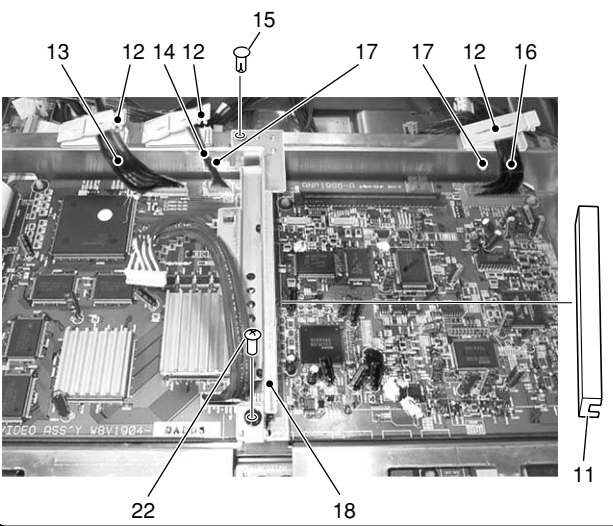
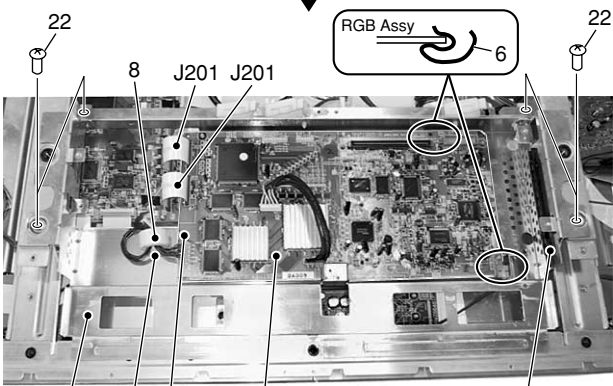
● MIDDLE LAYER SECTION (2) PARTS LIST

Mark	No.	Description	Part No.
NSP	1	IR Assy	AWZ6643
	2	MX LED Assy	AWZ6642
	3	J113 Wire J	ADX2699
	4	KEY CONNECTOR Assy	AWZ6638
	5	IR Holder	ANG2494
NSP	6	Nyron Rivet	AEC1671
	7	J111 Wire I	ADX2698
	8	Switch Holder	ANG2493
	9	Screw	BMZ30P040FMC
	10	Screw	ABZ30P050FZK

2.1.10 MIDDLE LAYER SECTION (3)



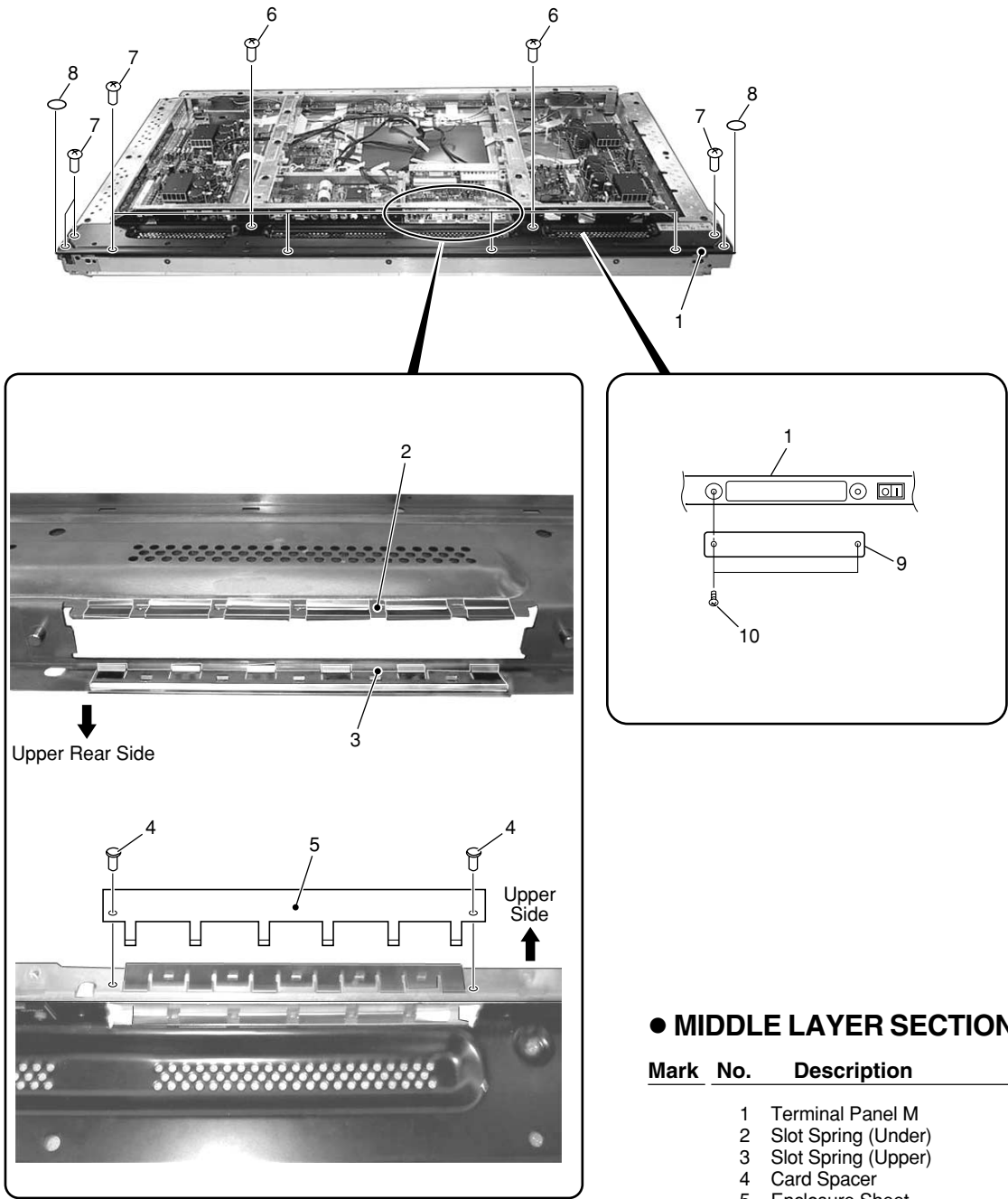
• Bottom Side



• MIDDLE LAYER SECTION (3) PARTS LIST

Mark	No.	Description	Part No.
NSP	1	RGB Assy	AWZ6632
	2	SLOT CONNECTOR Assy	AWZ6634
	3	Spacer	AEC1065
	4	Card Spacer	AEC1882
	5	RGB Base	ANA1662
NSP	6	Ground Finger	ANG2468
	7	Card Spacer	AEC1899
	8	Ferrite Core (L3)	ATX1037
	9	Ferrite Core Holder	AEC1818
	10	.....	
NSP	11	Guide Rail EX	BEC1185
	12	Clamp	AEC1884
	13	J107 12P Housing Wire	ADX2702
	14	J109 Wire G	ADX2696
	15	Nyron Rivet	AEC1671
NSP	16	J111 Wire I	ADX2698
	17	Wire Saddle	AEC1745
	18	Video Stay	AND1171
	19	.....	
	20	.....	
NSP	21	PCB Stay	AND1170
	22	Screw	AMZ30P060FZK
	23	Screw	VBB30P100FNI

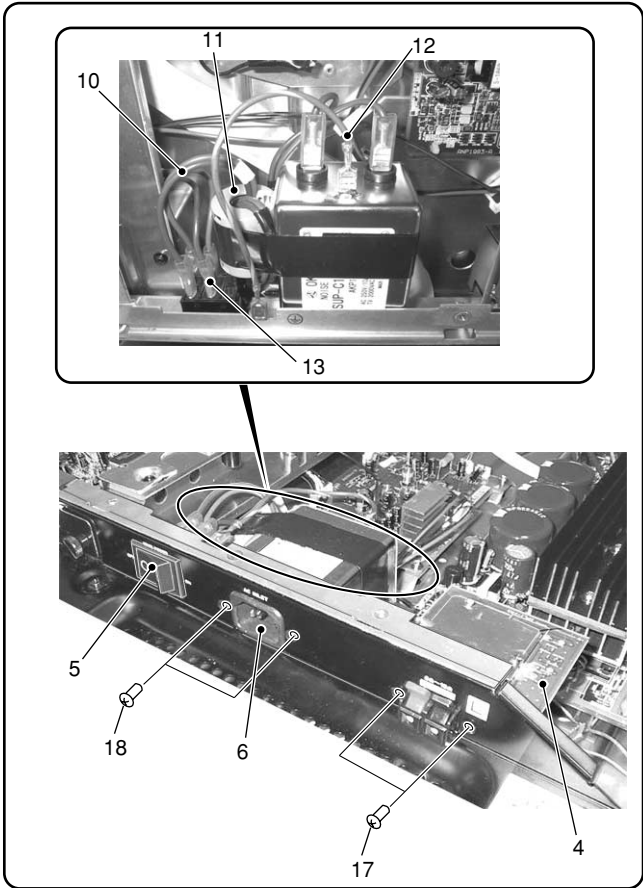
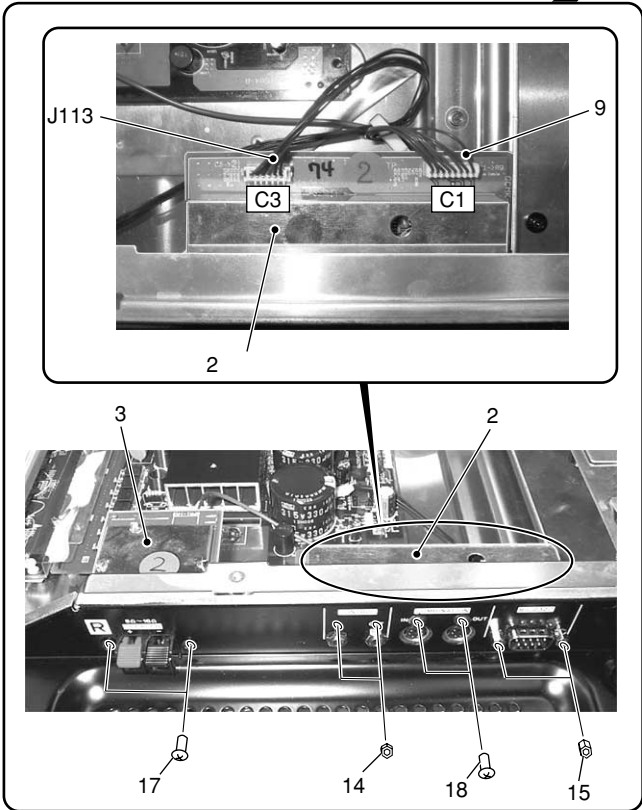
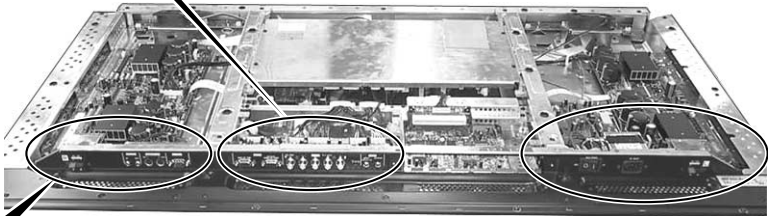
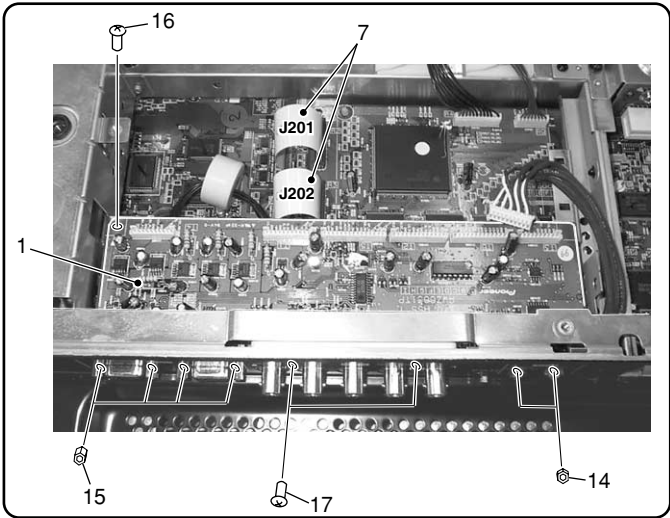
2.1.11 MIDDLE LAYER SECTION (4)



● MIDDLE LAYER SECTION (4) PARTS LIST

Mark	No.	Description	Part No.
	1	Terminal Panel M	ANG2452
	2	Slot Spring (Under)	ABK1028
	3	Slot Spring (Upper)	ABK1024
	4	Card Spacer	AEC1898
	5	Enclosure Sheet	AMR3281
	6	Screw	AMZ30P060FZK
	7	Screw	TBZ40P080FZK
	8	Rear Corner Label	AAX2862
	9	Expansion Slot Cover	ANG2463
	10	Screw	BMZ30P060FZK

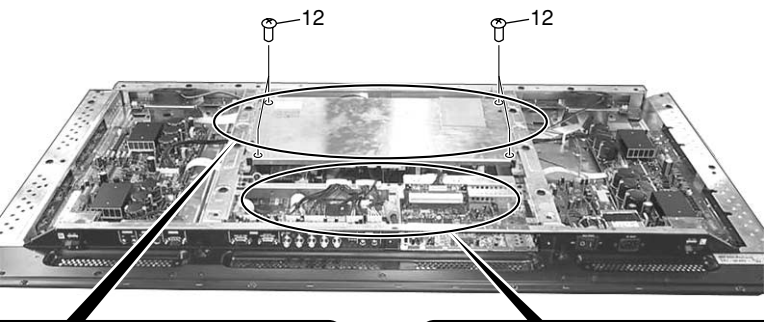
2.1.12 UPPER LAYER SECTION (1)

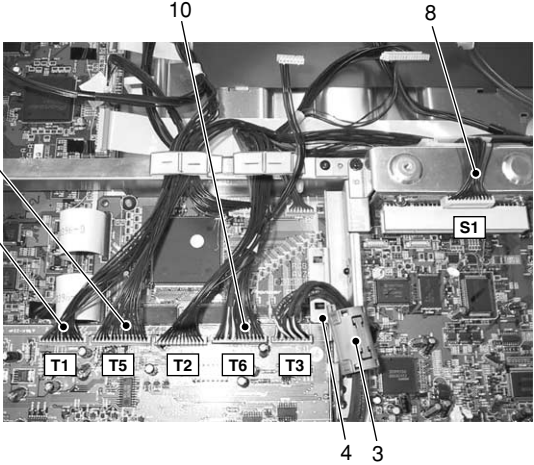
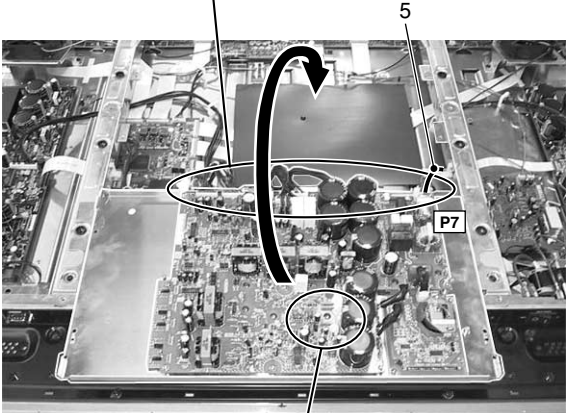
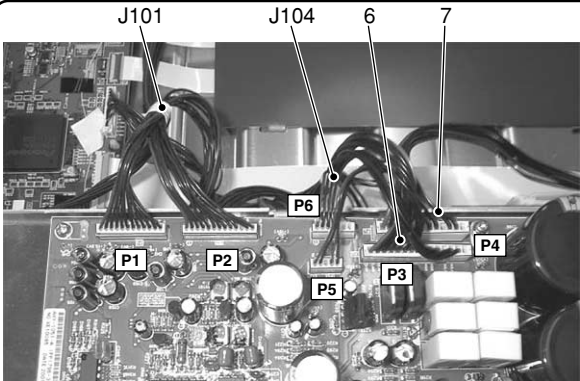


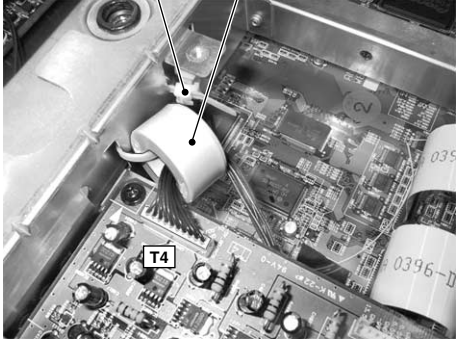
# ● UPPER LAYER SECTION (1) PARTS LIST

Mark	No.	Description	Part No.
	1	I/O Assy	AWZ6631
	2	CONTROL Assy	AWZ6633
	3	SP OUT R Assy	AWZ6636
	4	SP OUT L Assy	AWZ6635
△	5	Power Switch (S1)	BSM1006
△	6	AC Inlet with Filter (CN1)	AKP1223
	7	J201, J202 Flexible Cable	ADD1183
	8	.....	
	9	J109 Wire G	ADX2696
	10	J106 Wire C	ADX2693
	11	Ferrite Core (L1)	ATX1032
	12	J114 Earth Wire	ADX2709
	13	J105 Wire B	ADX2692
	14	Hexagonal Nut	ABN1035
	15	Hexagonal Head Screw	BBA1051
	16	Screw	PMB30P060FNI
	17	Screw	BPZ30P080FZK
	18	Screw	BMZ30P060FZK

2.1.13 UPPER LAYER SECTION (2)





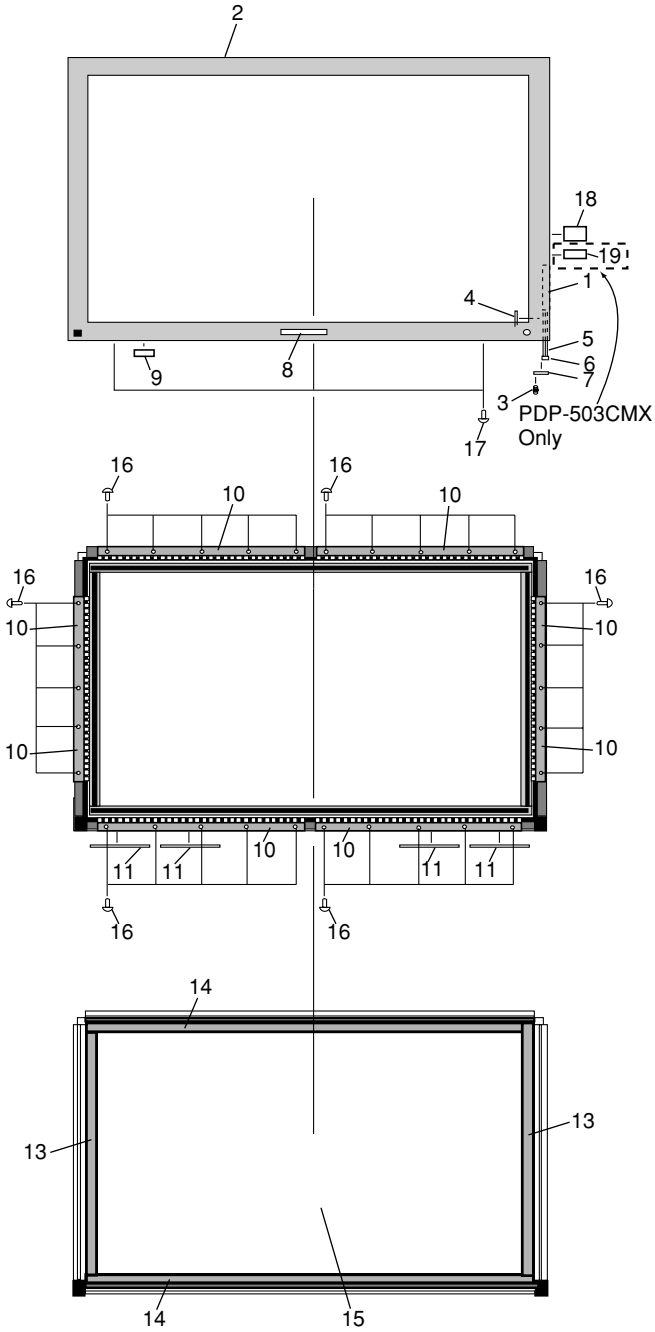


● UPPER LAYER SECTION (2) PARTS LIST

Mark	No.	Description	Part No.
△	1	SW Power Supply Module	AXY1053
	2	Ferrite Core (L3)	ATX1037
	3	Ferrite Core (L2)	ATX1039
	4	Binder	AEC-093
	5	J105 Wire B	ADX2692
	6	J102 Wire E	ADX2694
	7	J103 13P Housing Wire	ADX2700
	8	J112 13P Housing Wire	ADX2703
	9	J101 Wire F	ADX2695
	10	J104 Wire H	ADX2697
	11	J111 Wire I	ADX2698
	12	Screw	AMZ30P060FZK



2.1.14 FRONT CASE SECTION



● FRONT CASE SECTION PARTS LIST

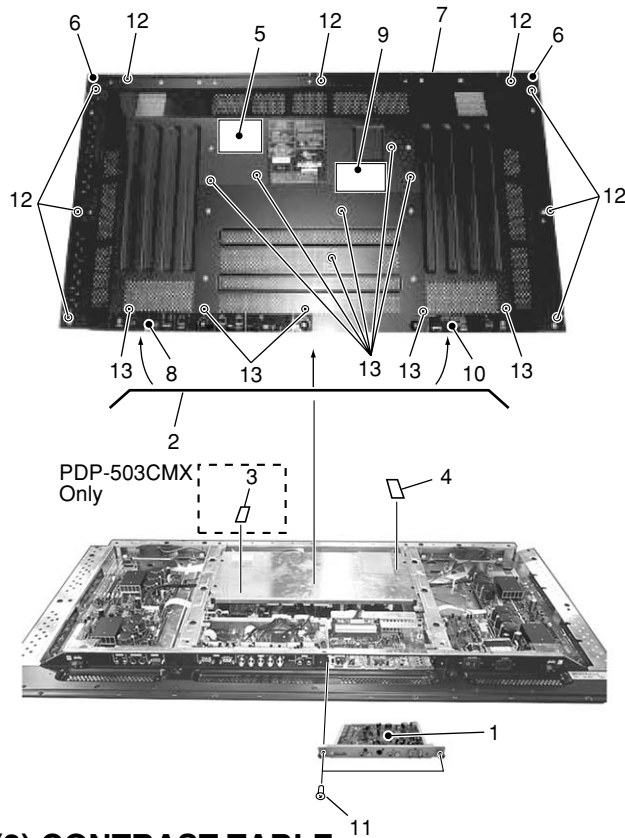
Mark	No.	Description	Part No.
	1	SIDE KEY Assy	AWZ6637
	2	Front Case 50 (M)	AMB2698
	3	Rivet	AEC1877
	4	Flexible Seal	AEH1036
	5	J213 Flexible Cable	ADD1195
	6	Ferrite Core (L4)	ATX1043
	7	Lead Cover (MX)	AMB2703
	8	Pioneer Badge	AAM1091
NSP	9	Serial Label	AAX2609
NSP	10	Panel Holder	ANG2466
	11	Front Spacer	AEC1896
	12	.....	
	13	Panel Cushion V	AED1199
	14	Panel Cushion H	AED1198
	15	Protect Panel Assy	AMR3266
	16	Screw	ABZ30P050FZK
	17	Screw	VMZ30P060FZK
	18	Energy Star Label	AAX2856
	19	Display Label	See Contrast table (2)

(2) CONTRAST TABLE

PDP-503CMX/LUCB and PDP-503MXE/YVLDK are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			PDP-503CMX	PDP-503MXE	
			LUCB	YVLDK	
NSP	19	Display Label	AAX2836	Not used	

### 2.1.15 REAR SECTION



#### ● REAR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	VIDEO SLOT ST1 Assy	AWV1906
	2	Gascket A	ANK1688
	3	Solder Warning Label	See Contrast table (2)
	4	Silicon Sheet P	AEH1035
	5	Cleaning Label	AAZ2751
	6	Rear Corner Label	AAZ2862
	7	Rear Case (50M)	ANE1597
	8	Terminal Display Label R	AAZ2853
	9	Bolt Caution Label	AAZ2852
	10	Terminal Display Label L	See Contrast table (2)
	11	Screw	BMZ30P060FZK
	12	Screw	TBZ40P080FZK
	13	Screw	AMZ30P060FZK

### (2) CONTRAST TABLE

PDP-503CMX/LUCB and PDP-503MXE/YVLDK are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			PDP-503CMX	PDP-503MXE	
			LUCB	YVLDK	
	3	Solder Warning Label	AAZ2644	Not used	
	10	Terminal Display Label	AAZ2855	AAZ2850	

### 2.1.16 PANEL CHASSIS (50) ASSY (AWU1037)

#### ● PARTS LIST

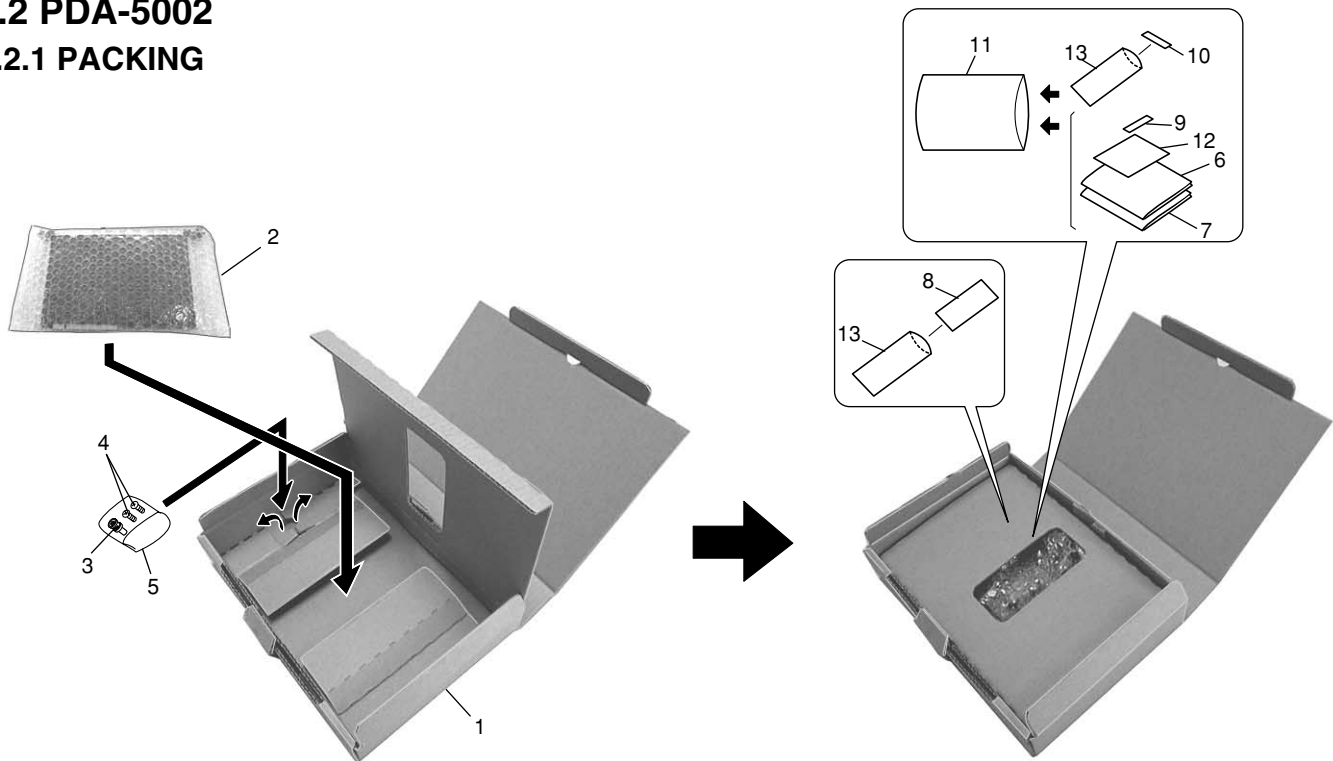
Mark	No.	Description	Part No.
NSP		SCAN FUKUGO ASSY	AWV1898
		ADDRESS FUKUGO ASSY	AWV1900
NSP		Address Module (IC1 - IC40)	AXF1110
NSP		FPC (0003)	ADY1065
NSP		FPC (J0001)	ADY1066
NSP		Chassis	ANA1655
NSP		Base Chassis	ANA1656
NSP		Scan Heatsink	ANH1595
NSP		Corner Angle A	ANG2457
NSP		Corner Angle B	ANG2458
NSP		Tube Cover	AMR3262
		Siricon Sheet 50	AEH1037
		Adhesive Tape 50	AEH1038
		Adhesive Tape B (50)	AEH1051
		Pin Grommet	AEC1015
		Card Spacer	AEC1889
		Scan Siricon Sheet	AEH1040
NSP		Plasma Panel Assy	AAV1238
		Screw	VBB30P100FNI

#### ● LIST OF ASSY

Mark	No.	Description	Part No.
NSP		SCAN FUKUGO ASSY	AWV1898
NSP		— SCAN (A) ASSY	AWZ6616
NSP		— SCAN (B) ASSY	AWZ6617
NSP		— X CONNECTOR (A) ASSY	AWZ6618
NSP		— X CONNECTOR (B) ASSY	AWZ6619
NSP		— BRIDGE A ASSY	AWZ6620
NSP		— BRIDGE B ASSY	AWZ6621
NSP		— BRIDGE C ASSY	AWZ6622
NSP		— BRIDGE D ASSY	AWZ6623
NSP		— CLAMP A ASSY	AWZ6650
NSP		— CLAMP B ASSY	AWZ6651
NSP		— CLAMP C ASSY	AWZ6652
NSP		— CLAMP D ASSY	AWZ6653
		ADDRESS FUKUGO ASSY	AWV1900
NSP		— ADR CONNECT A ASSY	AWZ6626
NSP		— ADR CONNECT B ASSY	AWZ6627
NSP		— ADR CONNECT C ASSY	AWZ6628
NSP		— ADR CONNECT D ASSY	AWZ6629
NSP		— RESONANCE ASSY	AWZ6630

2.2 PDA-5002

2.2.1 PACKING

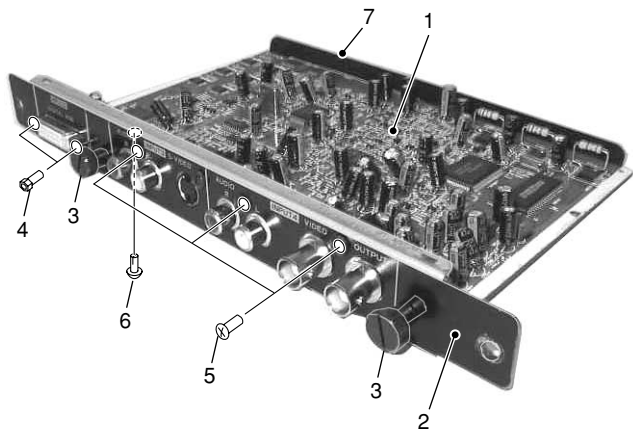


● PACKING PARTS LIST

Mark	No.	Description	Part No.
	1	Packing Case	AHD3096
	2	Sheet	AHG1315
	3	BNC/Pin Conversion Adapter	AKX1052
	4	Screw	BMZ30P060FZK
		(Accessory Screw for Installing Video Card)	

Mark	No.	Description	Part No.
NSP	5	Vinyl Bag	AHG-064
	6	Operating Instructions (Spanish/Italian/Dutch)	ARC1504
	7	Operating Instructions (Japanese/English/French/German)	ARD1043
NSP	8	Warranty Card	ARY1093
	9	Connector Indicator Label	AAX2854
	10	Label for Remote Control Unit	AAX2875
	11	Vinyl Bag	AHG1310
NSP	12	Warranty Card	ARY1102
NSP	13	Vinyl Bag	AHG-195

2.2.2 MAIN UNIT



● MAIN UNIT PARTS LIST

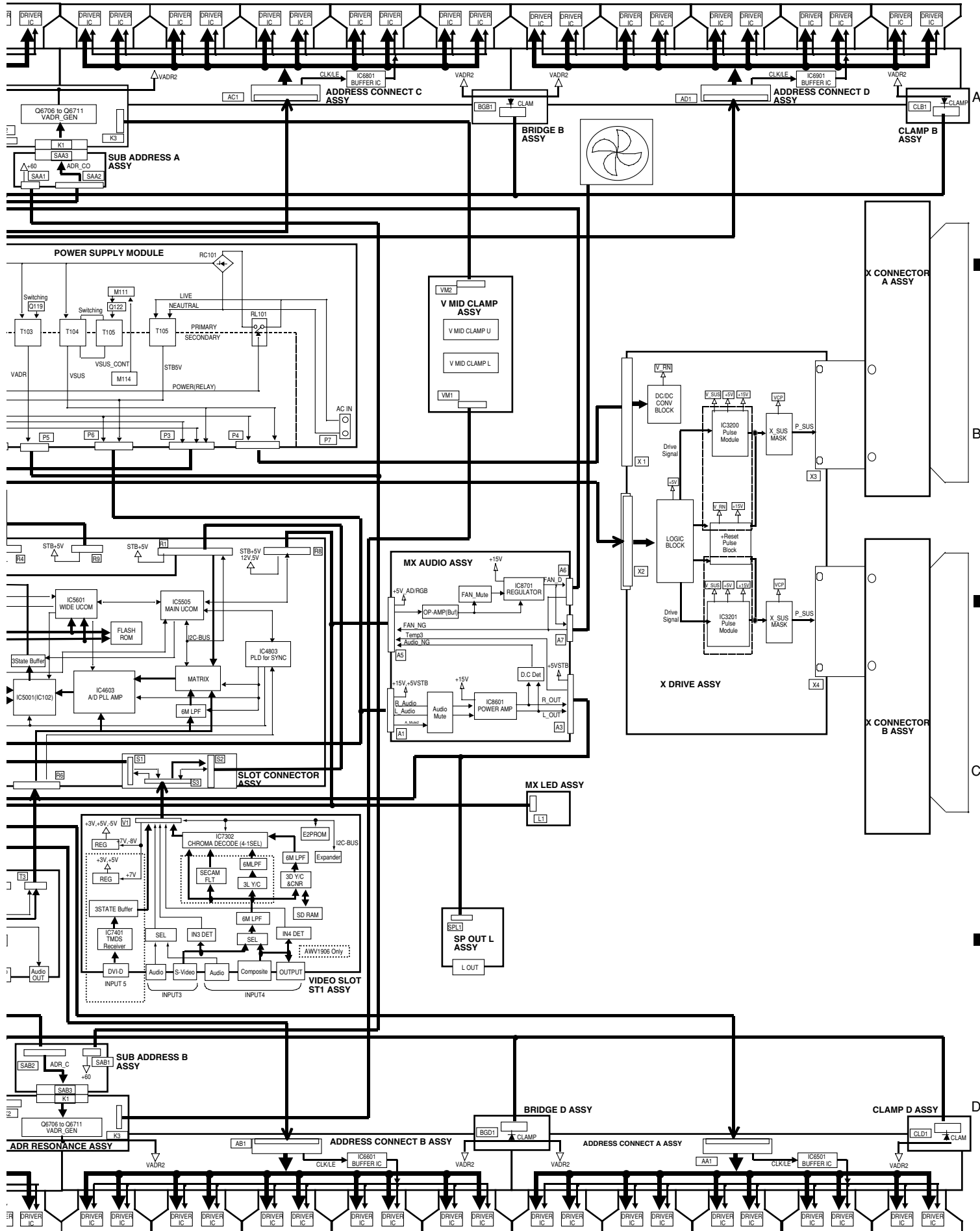
Mark	No.	Description	Part No.
	1	VIDEO SLOT ST1 Assy	AWV1906
	2	Video Terminal Panel M	ANG2461
	3	Screw	ABA1295
	4	Hexagonal Head Screw	BBA1051
	5	Screw	BPZ30P080FZK
	6	Rivet	AEP-211
	7	Sheet	AMR3282



# 3.1 BLOCK DIAGRAM

## 3.1.1 OVERALL BLOCK DIAGRAM

PDP-503CMX, PDP-503MXE, PDA-5002



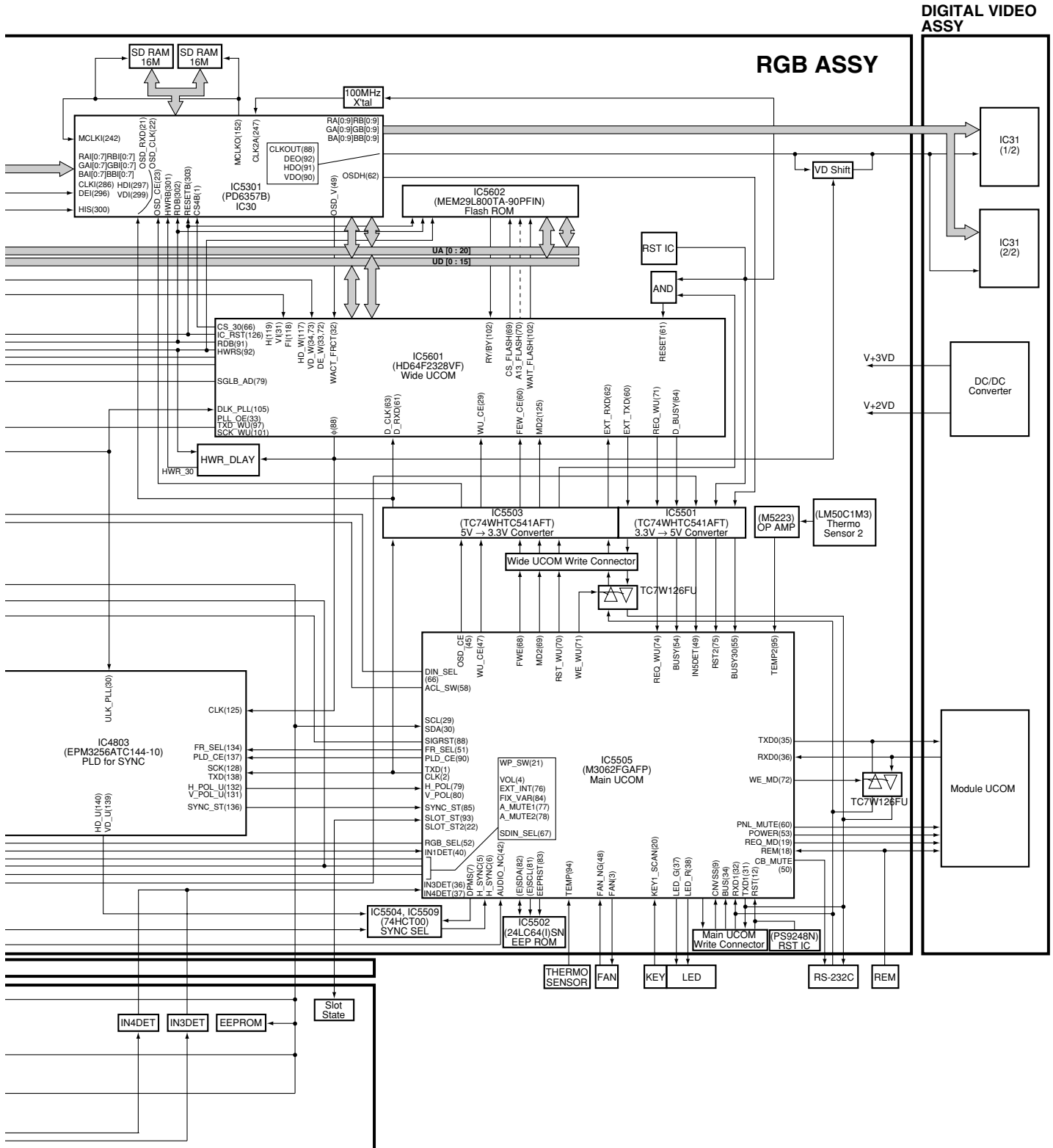
Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".

B

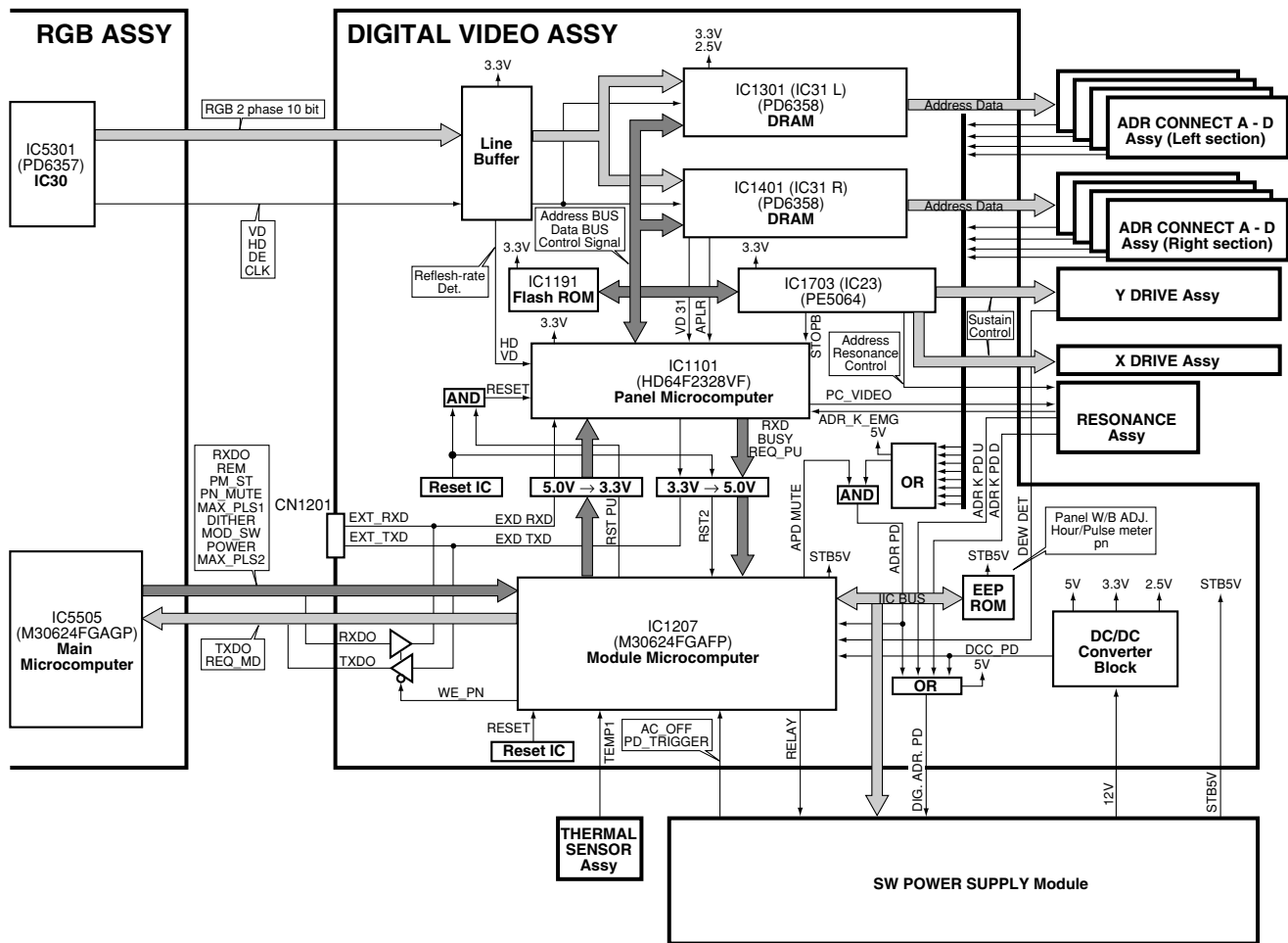


D



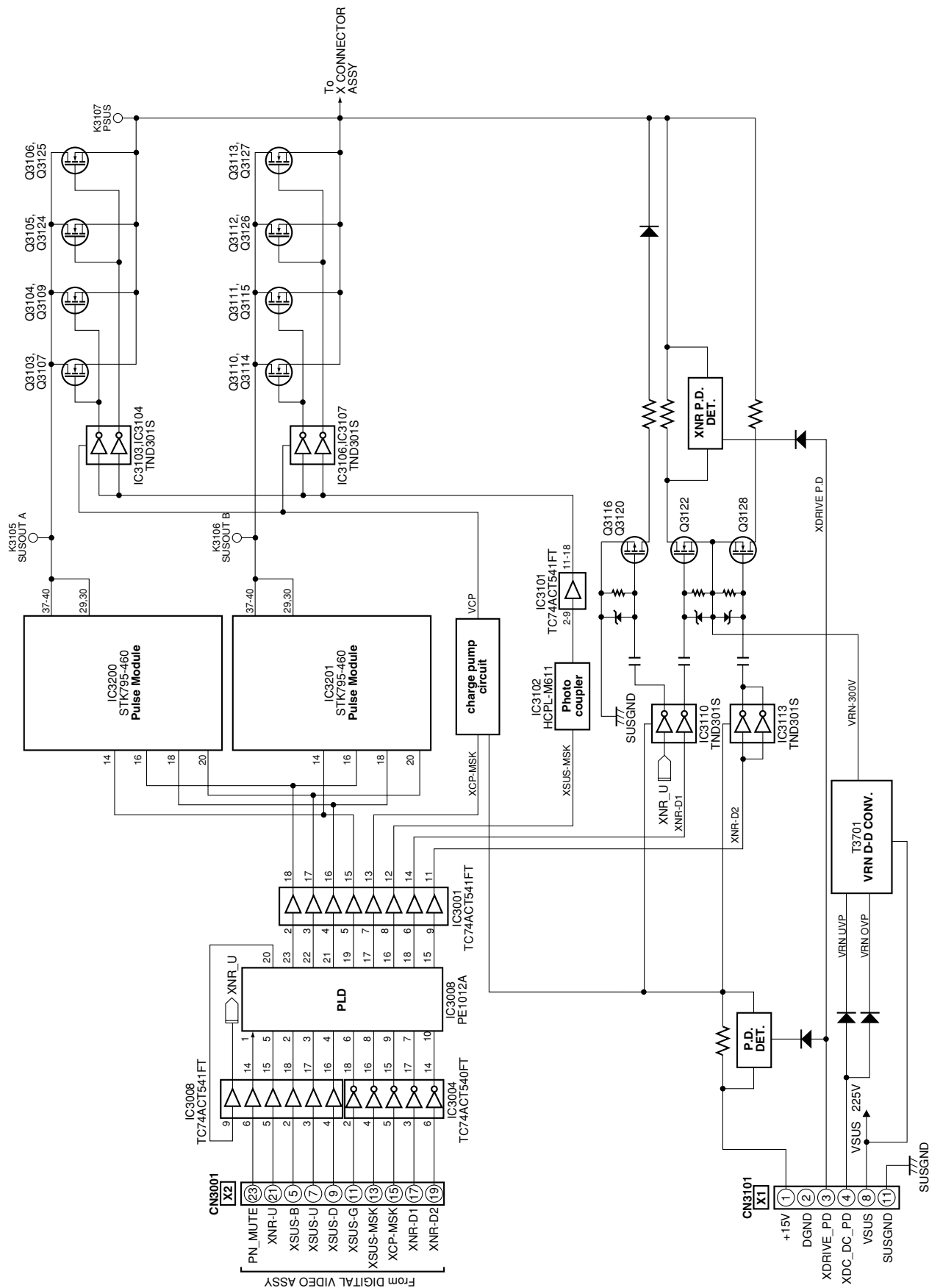


3.1.3 DIGITAL VIDEO ASSY

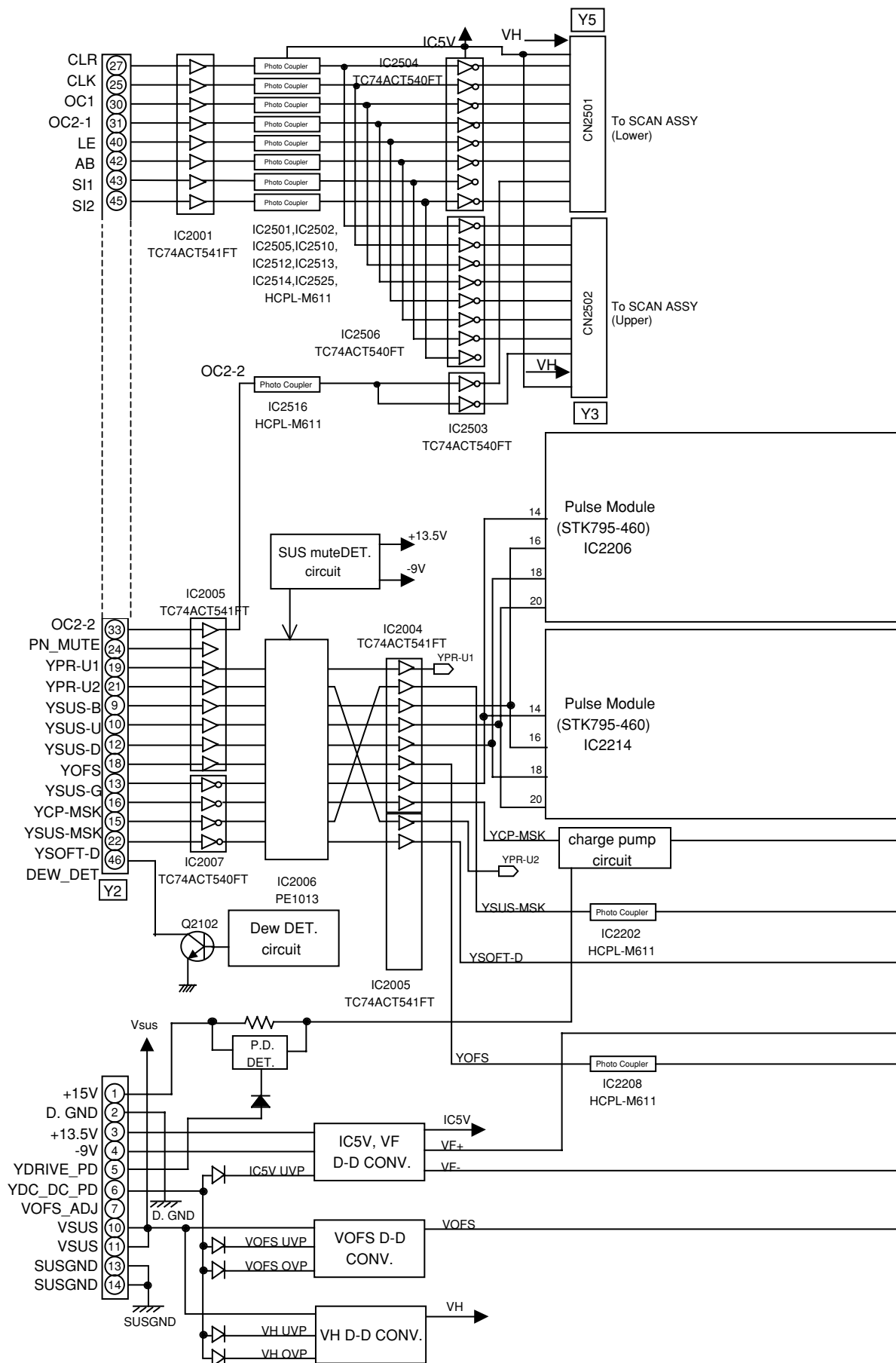


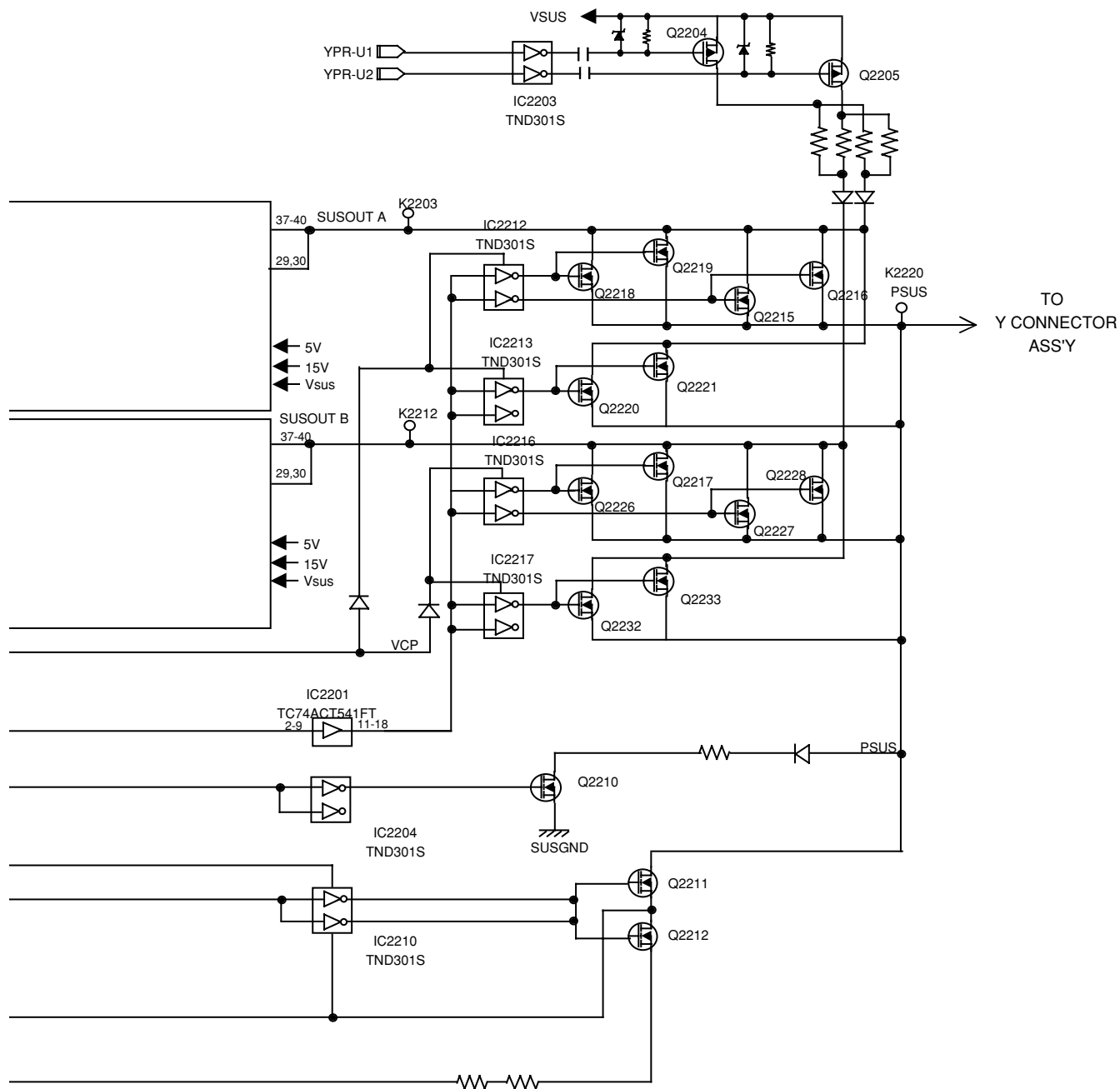


### 3.1.4 X DRIVE ASSY

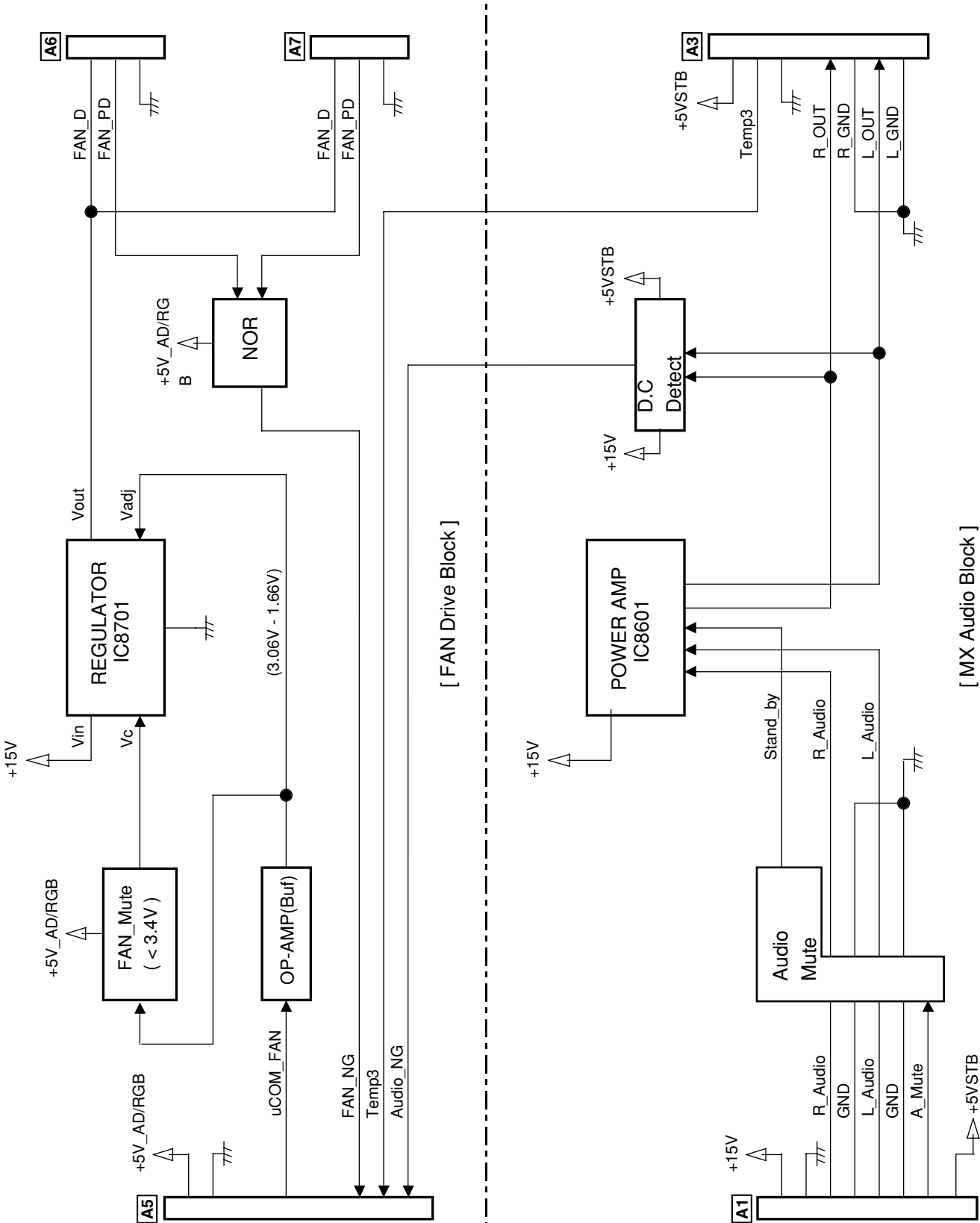


3.1.5 Y DRIVE ASSY

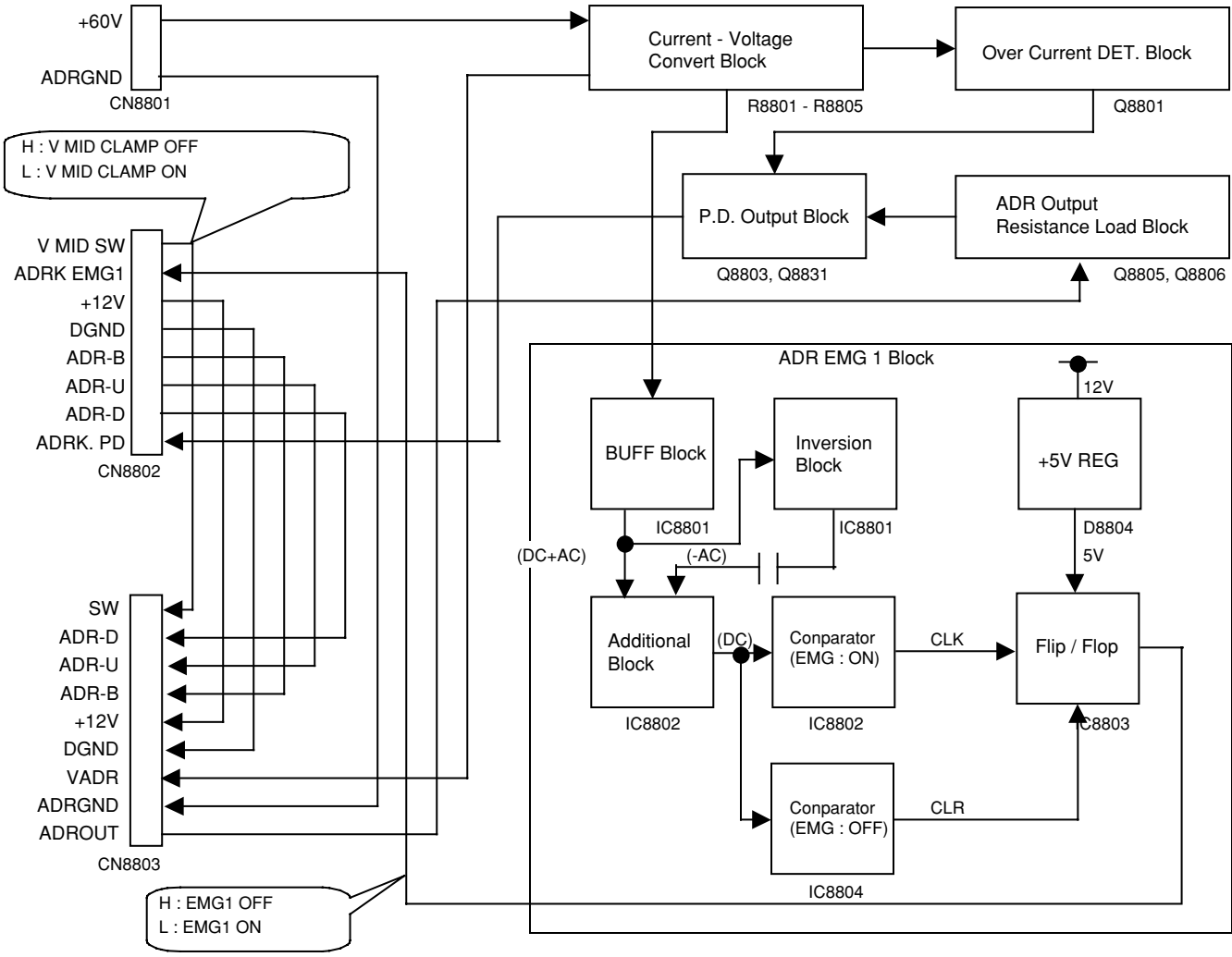




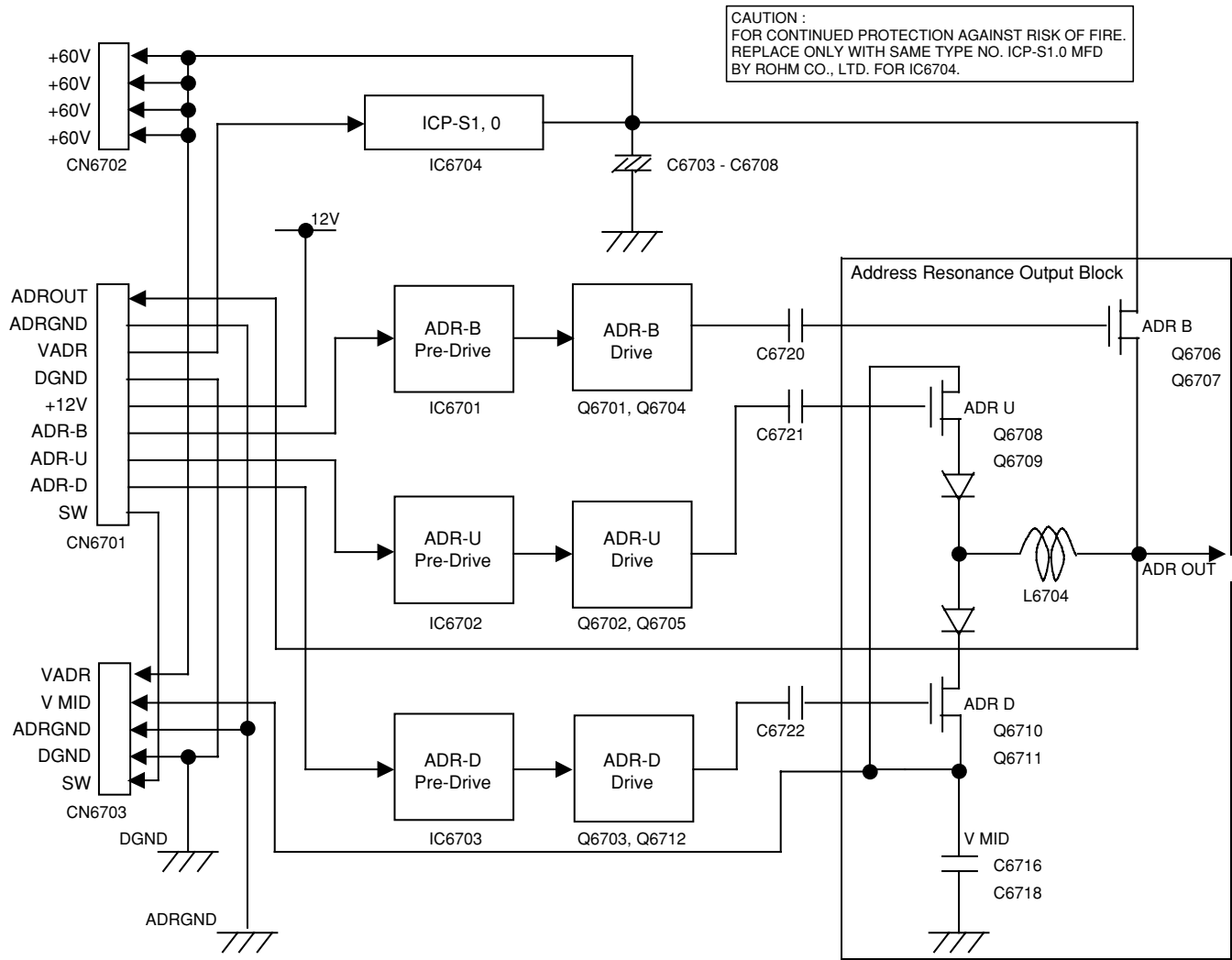
3.1.6 MX AUDIO ASSY



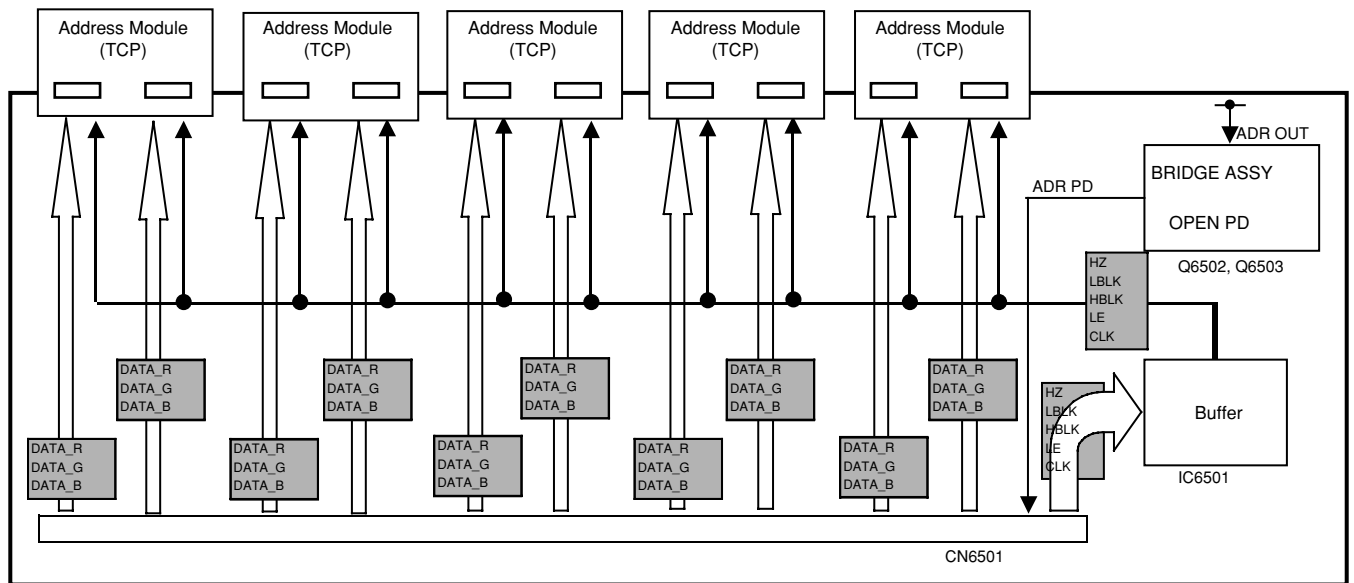
3.1.7 SUB ADDRESS A and B ASSYS



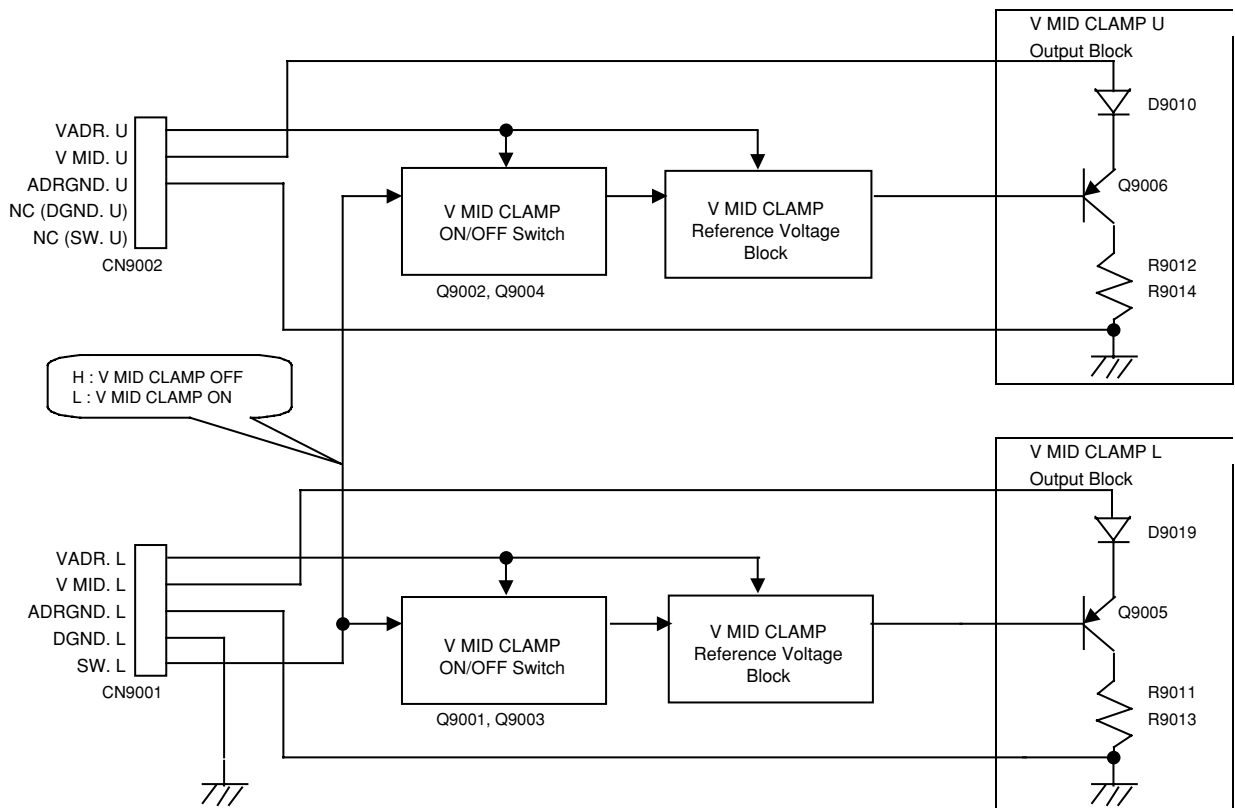
3.1.8 RESONANCE ASSY



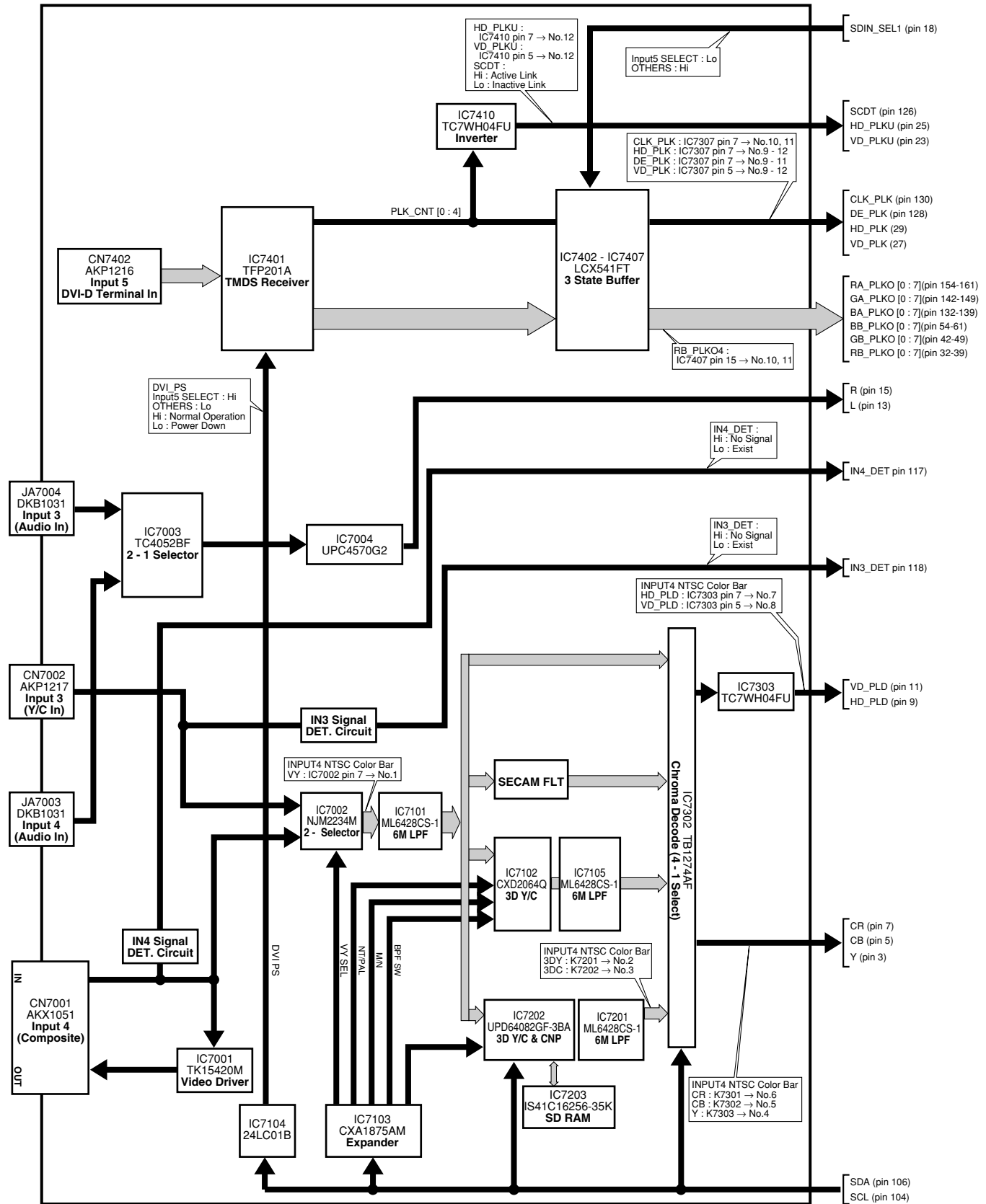
### 3.1.9 ADR CONNECT A, B, C and D ASSYS



### 3.1.10 V MID CLAMP ASSY

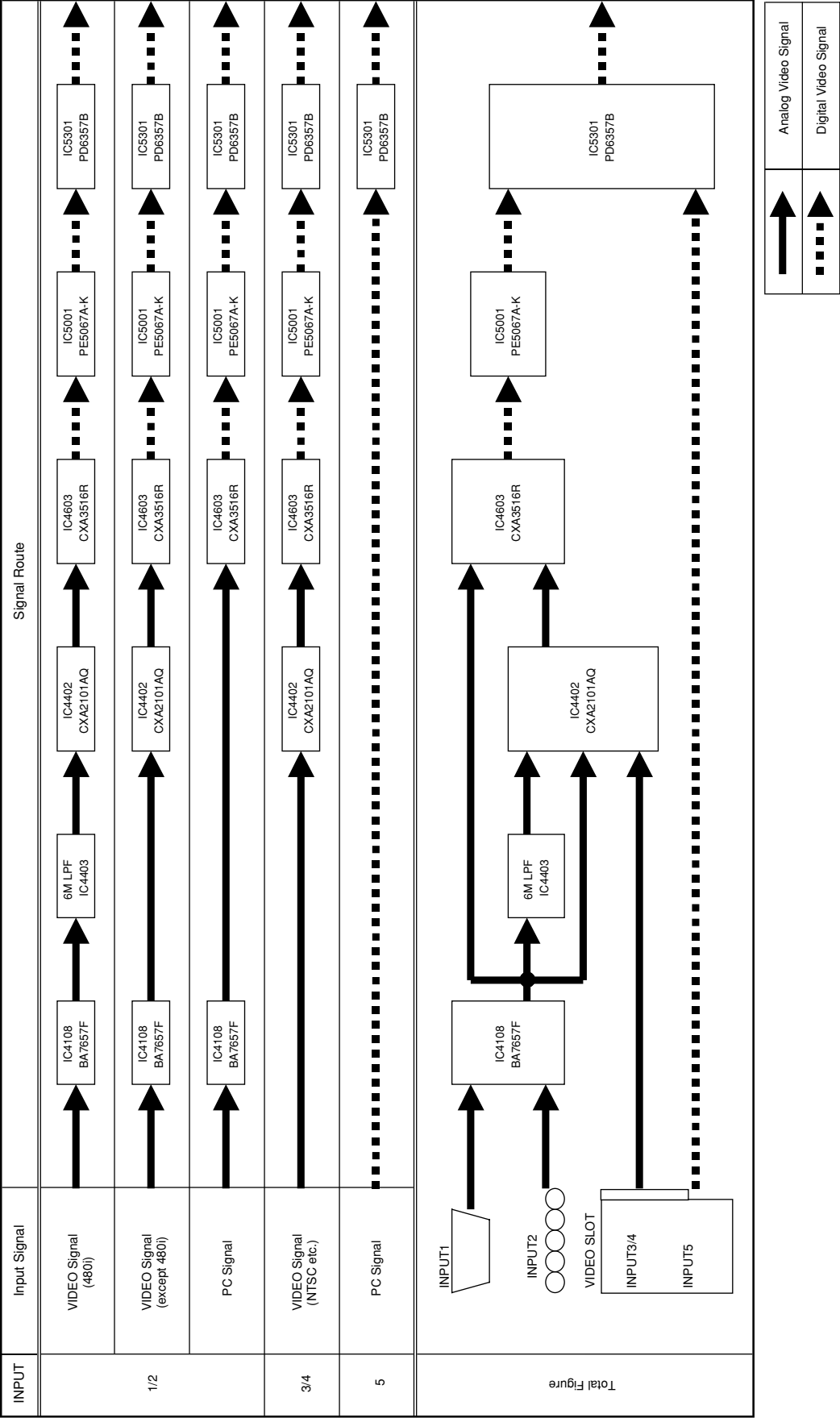


### 3.1.11 VIDEO CARD (PDA-5002)





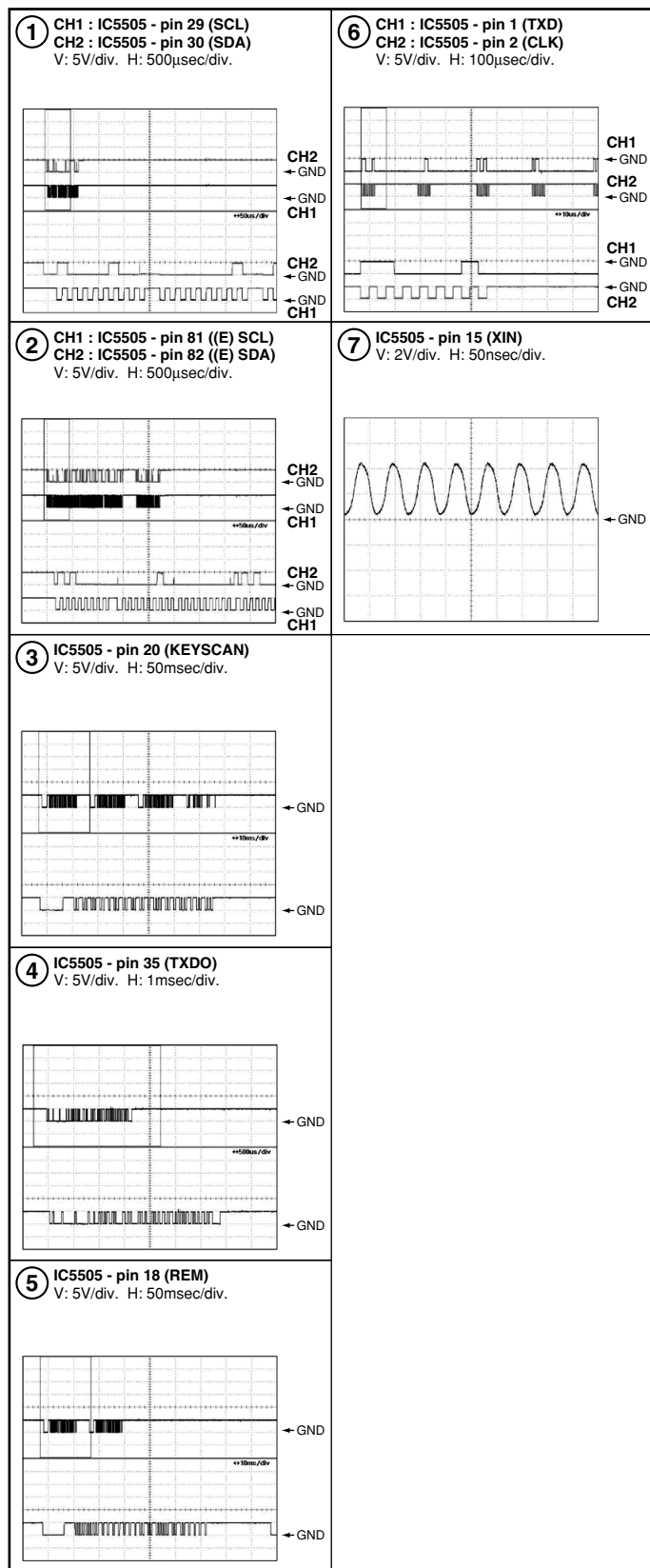
3.1.12 VIDEO SIGNAL ROUTE



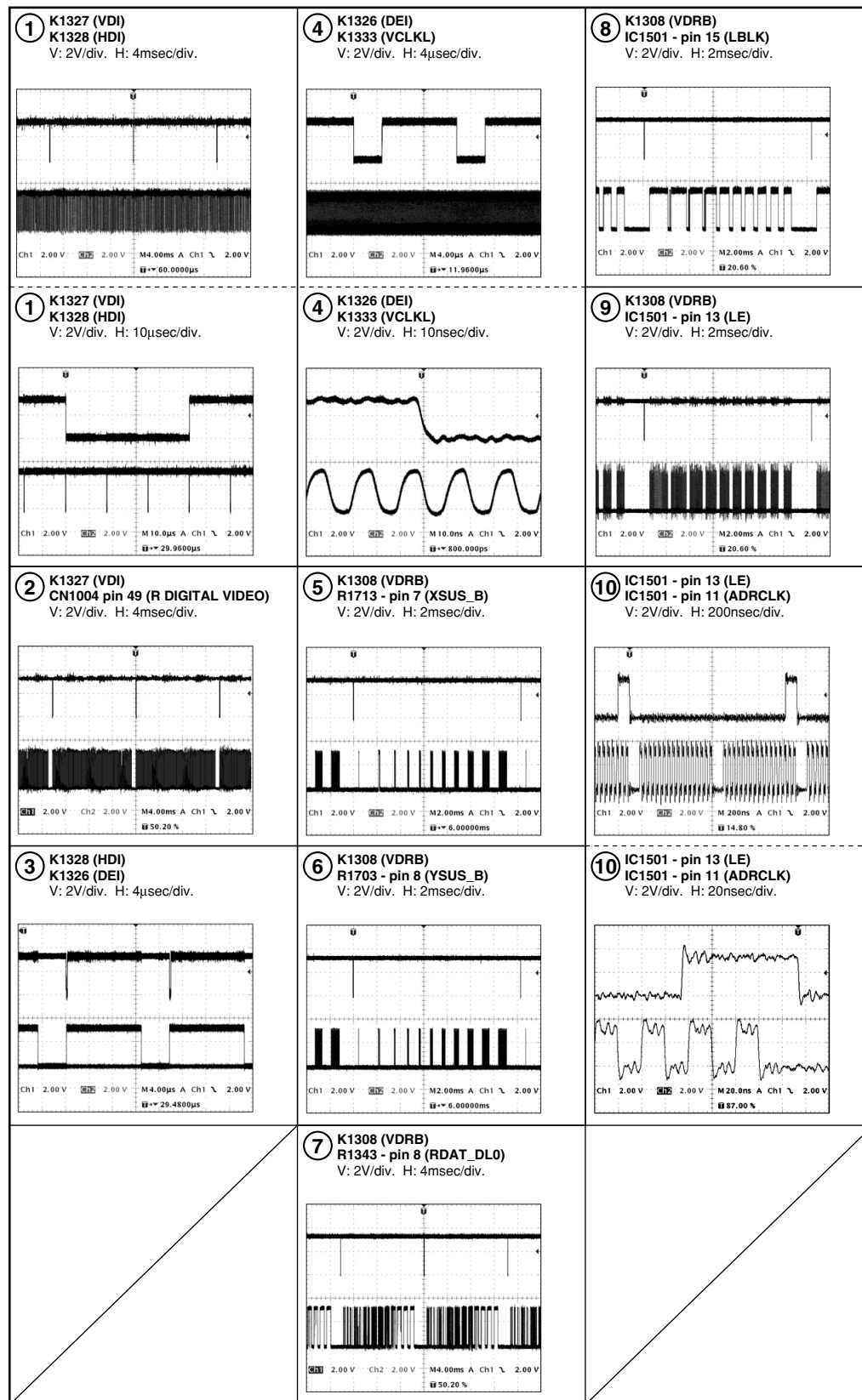


## 3.2 WAVEFORMS

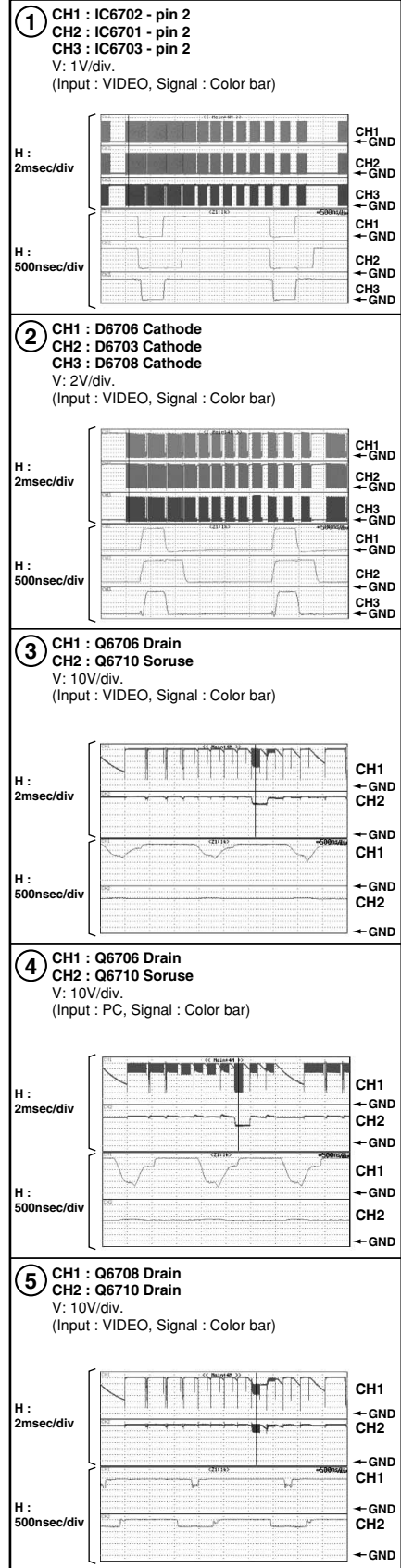
### RGB ASSY



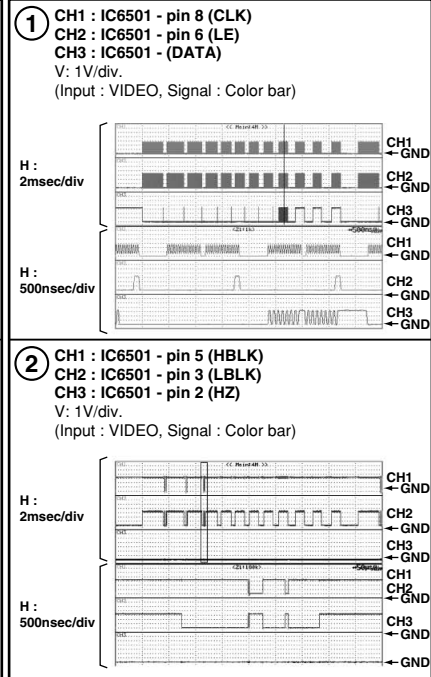
## DIGITAL VIDEO ASSY



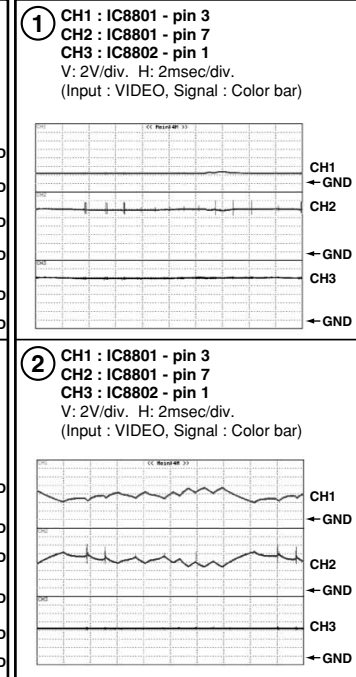
## RESONANCE ASSY



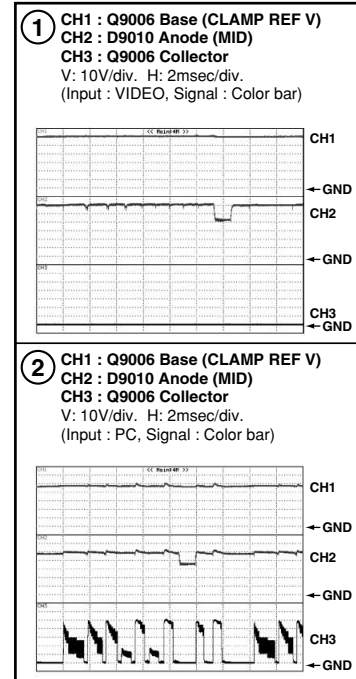
## ADR CONNECT A - D ASSY



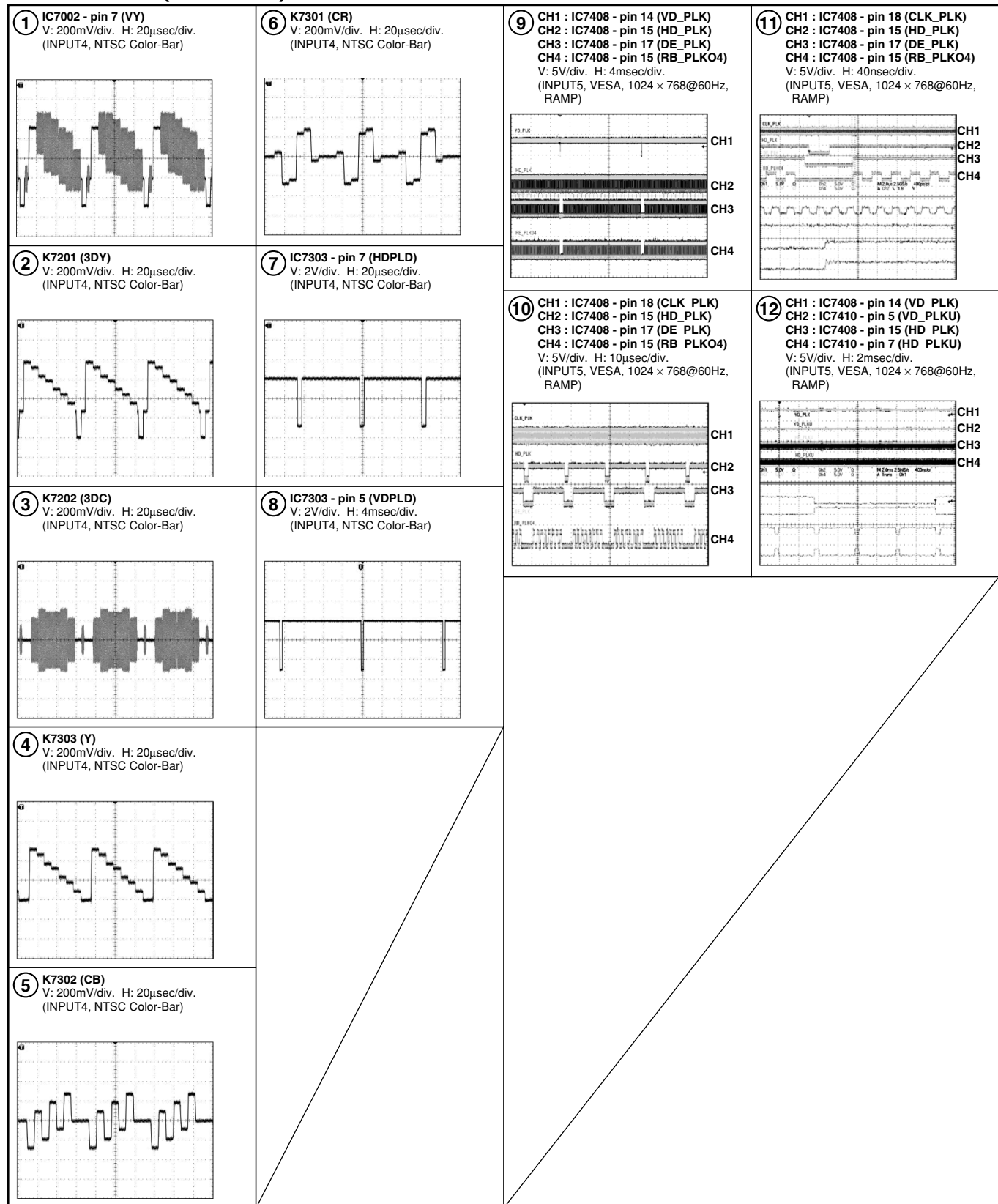
## SUB ADDRESS A, B ASSY



## V MID CLAMP ASSY

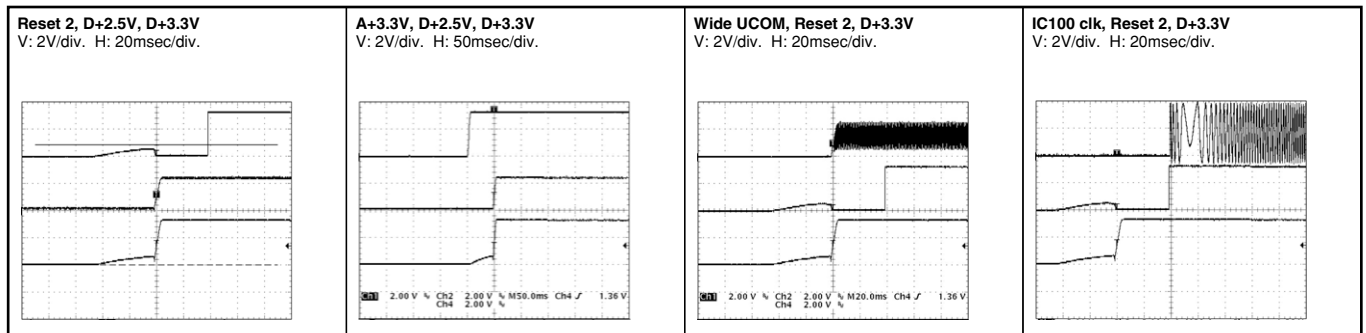


## VIDEO CARD (PDA-5002)

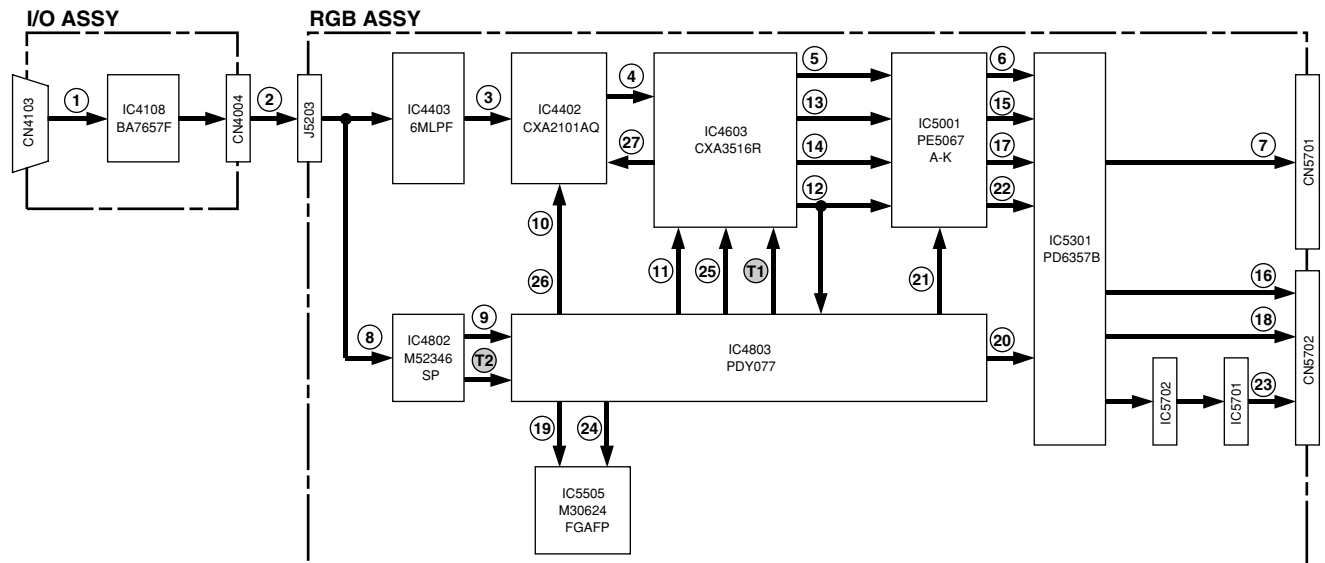


## RGB VIDEO Signal Waveforms

### Waveform at Power ON



### Measurement Point



### Trigger Signal

- T1 K4805 (HD\_PLL) : For Horizontal Sync. Signal
- T2 IC4802 - pin 13 : For Vertical Sync. Signal

### Measurement Condition

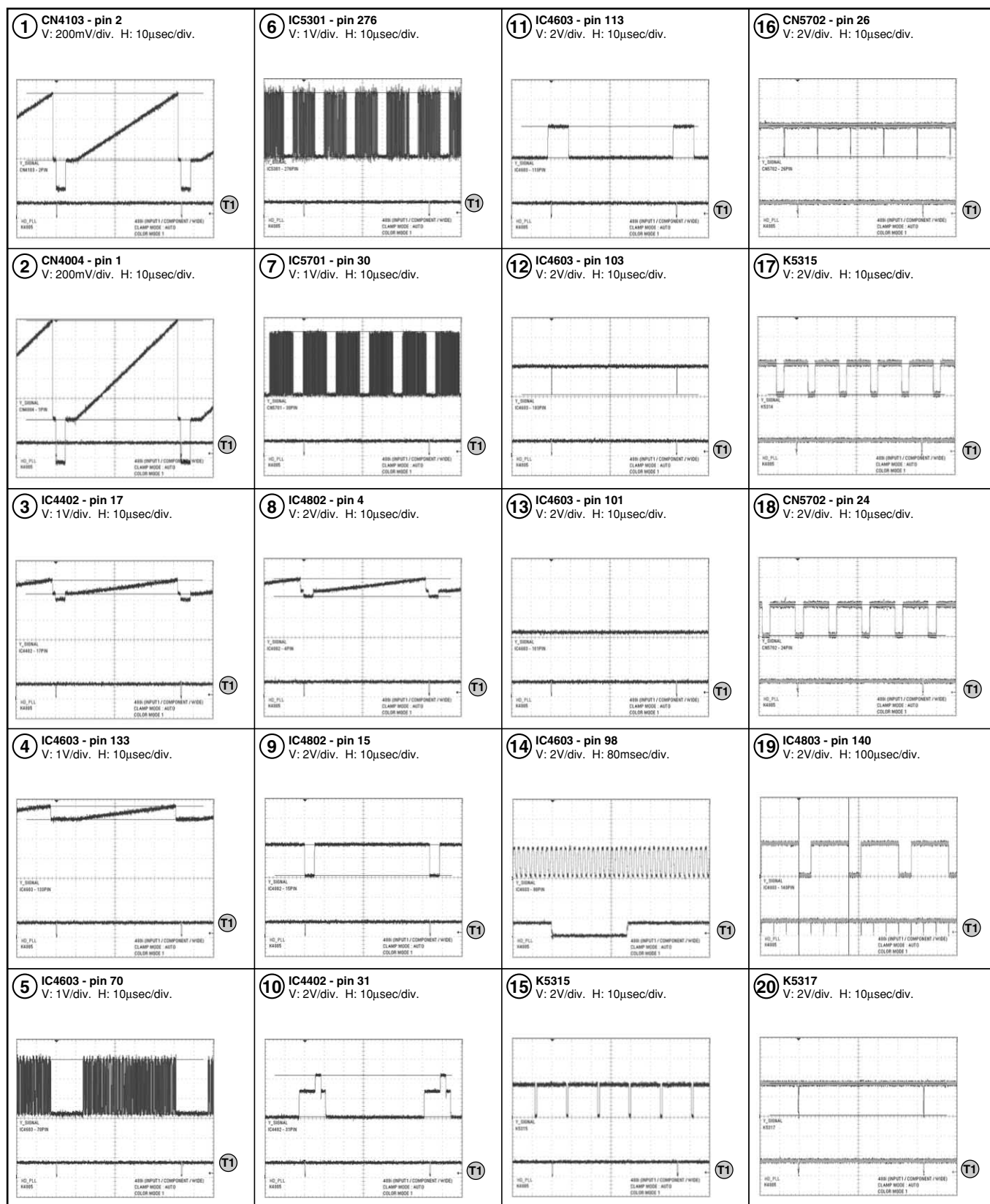
① to ②⑦ :	②⑧ to ②⑨ :	③⑩ to ③① :	③② to ③③ :
Input : INPUT 1 (Component)	Input : INPUT 2 (RGBHV)	Input : INPUT 5 (DVI)	Input : INPUT 2 (RGBHV)
Input Signal : 480i	Input Signal : XGA@60Hz	Input Signal : XGA@60Hz	Input Signal : 1125i
Signal Pattern : H RAMP	Signal Pattern : Monoscope	Signal Pattern : Monoscope	Signal Pattern : Monoscope
Screen Mode : WIDE	Screen Mode : FULL	Screen Mode : FULL	Screen Mode : FULL
Clamp Mode : AUTO	Clamp Mode : AUTO	Clamp Mode : AUTO	Clamp Mode : AUTO
Color Mode : COLOR MODE 1	Color Mode : COLOR MODE 1	Color Mode : COLOR MODE 1	Color Mode : COLOR MODE 1

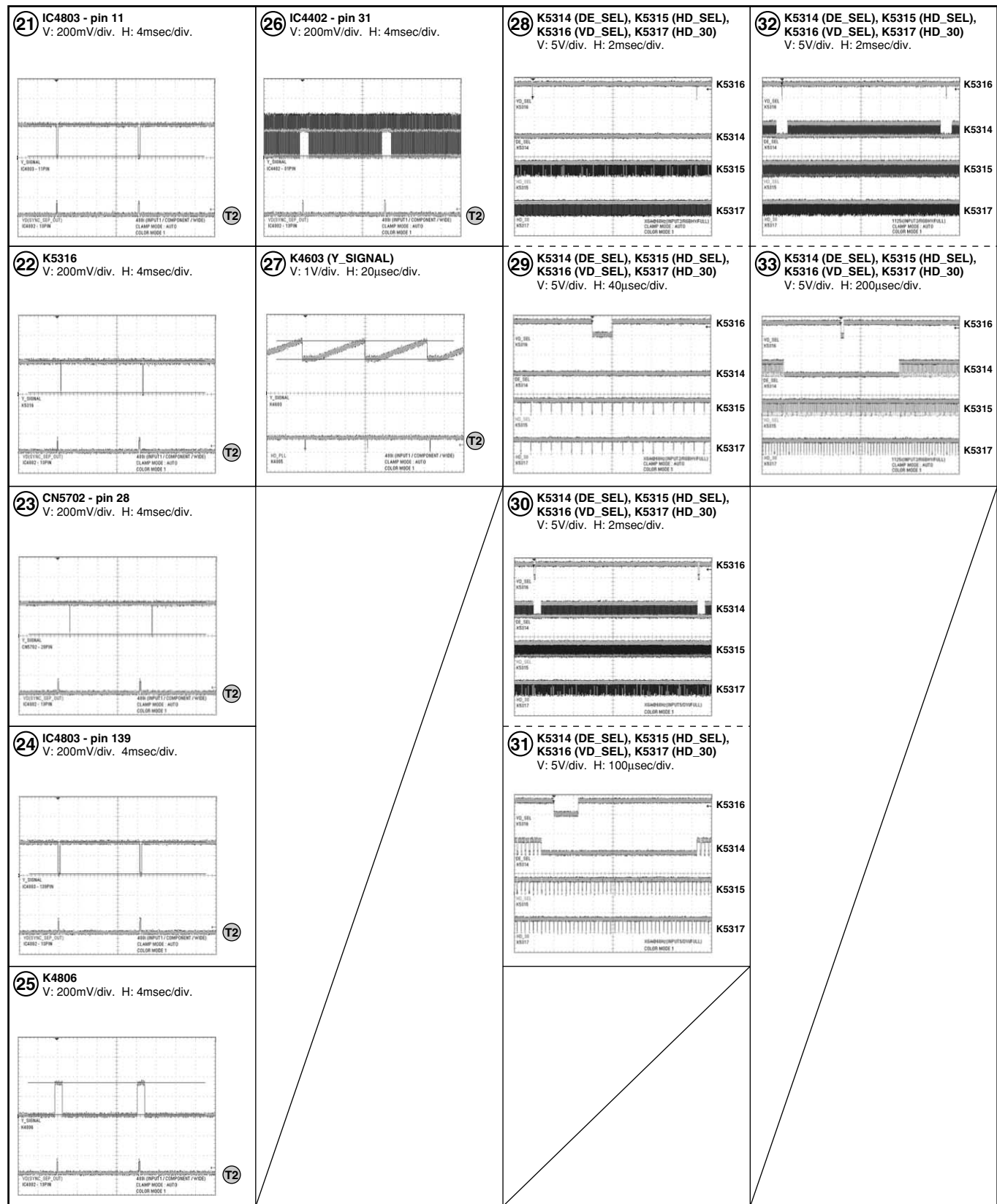
# PDP-503CMX, PDP-503MXE, PDA-5002

## ● Information

NO.	Point	Information	Trigger Signal (CH4)
1	CN4103 - pin 2	Synchronize with K4805 (HD_PLL)	T1
2	CN4004 - pin 1	Synchronize with K4805 (HD_PLL)	T1
3	IC4402 - pin 17	Synchronize with K4805 (HD_PLL)	T1
4	IC4603 - pin 133	Synchronize with K4805 (HD_PLL)	T1
5	IC4603 - pin 70	Synchronize with K4805 (HD_PLL)	T1
6	IC5301 - pin 276	Synchronize with K4805 (HD_PLL) and frequency is 4 times.	T1
7	IC5701 - pin 30	Do not synchronize with K4805 (HD_PLL)	T1
8	IC4802 - pin 4	Synchronize with K4805 (HD_PLL)	T1
9	IC4802 - pin 15	Synchronize with K4805 (HD_PLL)	T1
10	IC4402 - pin 31	Synchronize with K4805 (HD_PLL)	T1
11	IC4603 - pin 113	Synchronize with K4805 (HD_PLL)	T1
12	IC4603 - pin 103	Synchronize with K4805 (HD_PLL)	T1
13	IC4603 - pin 101	No output	T1
14	IC4603 - pin 98	Clock signal that synchronizes with K4805 (HD_PLL)	T1
15	K5315 (HD_SEL)	Synchronize with K4805 (HD_PLL) and frequency is 4 times.	T1
16	CN5702 - pin 26	Do not synchronize with K4805 (HD_PLL)	T1
17	K5314 (DE_SEL)	Synchronize with K4805 (HD_PLL) and frequency is 4 times.	T1
18	CN5702 - pin 24	Do not synchronize with K4805 (HD_PLL)	T1
19	IC4803 - pin 140	Synchronize with K4805 (HD_PLL) and frequency is 1/4 times.	T1
20	K5317 (HD_SEL)	Synchronize with K4805 (HD_PLL)	T1
21	IC4803 - pin 11	Synchronize with IC4802 - pin 13	T2
22	K5316 (VD_SEL)	Synchronize with IC4802 - pin 13	T2
23	CN5702 - pin 28	Synchronize with IC4802 - pin 13	T2
24	IC4803 - pin 139	Synchronize with IC4802 - pin 13	T2
25	K4806	Synchronize with IC4802 - pin 13	T2
26	IC4402 - pin 31	Synchronize with IC4802 - pin 13	T2
27	K4603 (Y_SIGNAL)	Synchronize with IC4802 - pin 13	T2
28	K5314 (DE_SEL)	K5314 (DE_SEL) is fixed to "L" level in the PC signal indication. K5315 (HD_SEL) and K5317 (HD _ 30) synchronize with K5316 (VD_SEL).	K5316 (VD_SEL)
	K5315 (HD_SEL)		
	K5316 (VD_SEL)		
	K5317 (HD _ 30)		
29	K5314 (DE_SEL)	Magnified K5316 (VD_SEL) section of No. 28. K5315 (HD_SEL) and K5317 (HD _ 30) are the same frequency in the PC signal indication.	K5316 (VD_SEL)
	K5315 (HD_SEL)		
	K5316 (VD_SEL)		
	K5317 (HD _ 30)		
30	K5314 (DE_SEL)	K5314 (DE_SEL) is not fixed to "L" level in the PC signal indication by the DVI input. K5314 (DE_SEL), K5315 (HD_SEL) and K5317 (HD _ 30) synchronize with K5316 (VD_SEL).	K5316 (VD_SEL)
	K5315 (HD_SEL)		
	K5316 (VD_SEL)		
	K5317 (HD _ 30)		
31	K5314 (DE_SEL)	Magnified K5316 (VD_SEL) section of No. 30. K5314 (DE_SEL), K5315 (HD_SEL) and K5317 (HD _ 30) are the same frequency in the PC signal indication by the DVI input.	K5316 (VD_SEL)
	K5315 (HD_SEL)		
	K5316 (VD_SEL)		
	K5317 (HD _ 30)		
32	K5314 (DE_SEL)	K5314 (DE_SEL) is not fixed to "L" level in the 1125i indication. K5314 (DE_SEL), K5315 (HD_SEL) and K5317 (HD _ 30) synchronize with K5316 (VD_SEL).	K5316 (VD_SEL)
	K5315 (HD_SEL)		
	K5316 (VD_SEL)		
	K5317 (HD _ 30)		
33	K5314 (DE_SEL)	Magnified K5316 (VD_SEL) section of No. 32. Frequency of 2 times of K5314 (DE_SEL), K5315 (HD_SEL) and K5317 (HD _ 30) in the 1125i indication.	K5316 (VD_SEL)
	K5315 (HD_SEL)		
	K5316 (VD_SEL)		
	K5317 (HD _ 30)		



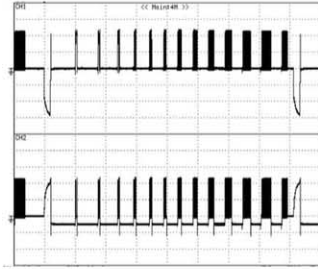




## Sustain Waveforms

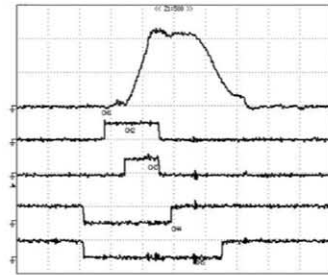
### ● Sustain Waveform (1 field)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)  
V: 100V/div. H: 2msec/div.  
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)  
V: 100V/div. H: 2msec/div.



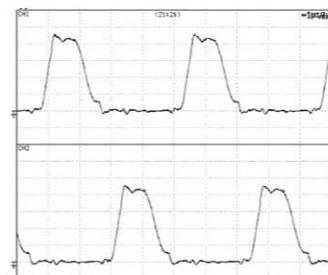
### ● Sustain Waveform

ch 1 : K2220 (Y.PSUS) - K2219 (SUSGND)  
V: 100V/div. H: 500nsec/div.  
ch 2 : K2028 (YSUS\_U) - K2024 (DGND)  
V: 10V/div. H: 500nsec/div.  
ch 3 : K2027 (YSUS\_B) - K2024 (DGND)  
V: 10V/div. H: 500nsec/div.  
ch 4 : K2029 (YSUS\_D) - K2024 (DGND)  
V: 10V/div. H: 500nsec/div.  
ch 5 : K2037 (YSUS\_G) - K2024 (DGND)  
V: 10V/div. H: 500nsec/div.



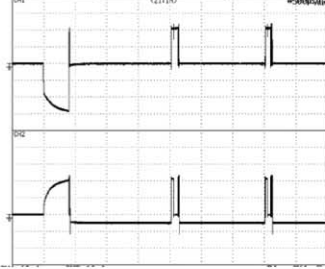
### ● Sustain Waveform (1 field)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)  
V: 50V/div. H: 1μsec/div.  
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)  
V: 50V/div. H: 1μsec/div.



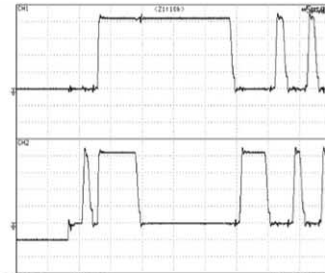
### ● Sustain Waveform (1 sub-field)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)  
V: 100V/div. H: 500μsec/div.  
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)  
V: 100V/div. H: 500μsec/div.



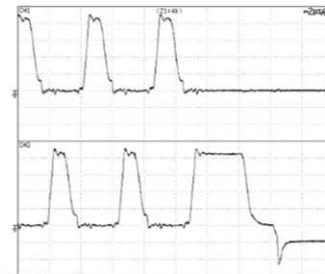
### ● Sustain Waveform (sustain)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)  
V: 50V/div. H: 5μsec/div.  
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)  
V: 50V/div. H: 5μsec/div.



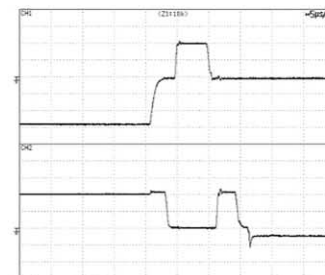
### ● Sustain Waveform (sustain)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)  
V: 50V/div. H: 2μsec/div.  
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)  
V: 50V/div. H: 2μsec/div.



### ● Sustain Waveform (reset pulse)

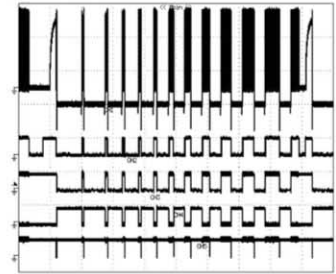
ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)  
V: 100V/div. H: 5μsec/div.  
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)  
V: 100V/div. H: 5μsec/div.



## Drive Pulse Waveforms

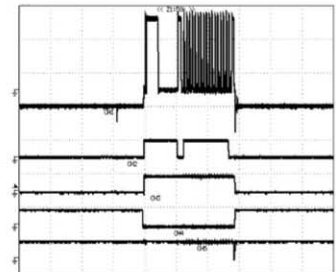
### ● Y Drive Pulse Control Waveform (1 field)

ch 1 : K2220 (Y.PSUS) - K2219 (SUSGND)  
V: 100V/div. H: 2msec/div.  
ch 2 : K2039 (YCP\_MSK) - K2024 (DGND)  
V: 10V/div. H: 2msec/div.  
ch 3 : K2040 (YSUS\_MSK) - K2024 (DGND)  
V: 10V/div. H: 2msec/div.  
ch 4 : K2041 (OFS) - K2024 (DGND)  
V: 10V/div. H: 2msec/div.  
ch 5 : K2053 (SOFT\_D) - K2024 (DGND)  
V: 10V/div. H: 2msec/div.



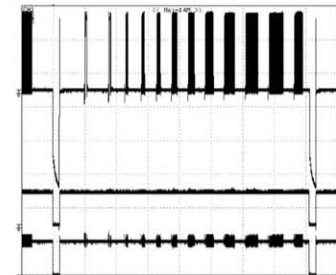
### ● Y Drive Pulse Control Waveform (1 sub-field)

ch 1 : K2220 (Y.PSUS) - K2219 (SUSGND)  
V: 100V/div. H: 50μsec/div.  
ch 2 : K2039 (YCP\_MSK) - K2024 (DGND)  
V: 10V/div. H: 50μsec/div.  
ch 3 : K2040 (YSUS\_MSK) - K2024 (DGND)  
V: 10V/div. H: 50μsec/div.  
ch 4 : K2041 (OFS) - K2024 (DGND)  
V: 10V/div. H: 50μsec/div.  
ch 5 : K2053 (SOFT\_D) - K2024 (DGND)  
V: 10V/div. H: 50μsec/div.



### ● X Drive Pulse Control Waveform (1 field)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)  
V: 100V/div. H: 2msec/div.  
ch 2 : K3017 (XCP\_MSK) - K3005 (DGND)  
V: 10V/div. H: 2msec/div.  
ch 3 : K3015 (XSUS\_MSK) - K3005 (DGND)  
V: 5V/div. H: 2msec/div.



## 5. PCB PARTS LIST

NOTES : ● Parts marked by “NSP” are generally unavailable because they are not in our Master Spare Parts List.

- The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by  $J = 5\%$ , and  $K = 10\%$ ).

560  $\Omega \rightarrow 56 \times 10^1 \rightarrow 561$  ..... RD1/4PU  $\begin{bmatrix} 5 & 6 & 1 \end{bmatrix} J$

47k  $\Omega \rightarrow 47 \times 10^3 \rightarrow 473$  ..... RD1/4PU  $\begin{bmatrix} 4 & 7 & 3 \end{bmatrix} J$

0.5  $\Omega \rightarrow R50$  ..... RN2H  $\begin{bmatrix} R & 5 & 0 \end{bmatrix} K$

1  $\Omega \rightarrow 1R0$  ..... RS1P  $\begin{bmatrix} 1 & R & 0 \end{bmatrix} K$

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k  $\Omega \rightarrow 562 \times 10^1 \rightarrow 5621$  ..... RN1/4PC  $\begin{bmatrix} 5 & 6 & 2 & 1 \end{bmatrix} F$

Mark	No.	Description	Part No.
------	-----	-------------	----------

### LIST OF ASSEMBLIES

#### PDP-503CMX, PDP-503MXE

NSP	SCAN FUKUGO ASSY	AWV1898
NSP	— SCAN (A) ASSY	AWZ6617
NSP	— SCAN (B) ASSY	AWZ6616
NSP	— X CONNECTOR (A) ASSY	AWZ6618
NSP	— X CONNECTOR (B) ASSY	AWZ6619
NSP	— BRIDGE A ASSY	AWZ6620
NSP	— BRIDGE B ASSY	AWZ6621
NSP	— BRIDGE C ASSY	AWZ6622
NSP	— BRIDGE D ASSY	AWZ6623
NSP	— CLAMP A ASSY	AWZ6650
NSP	— CLAMP B ASSY	AWZ6651
NSP	— CLAMP C ASSY	AWZ6652
NSP	— CLAMP D ASSY	AWZ6653

	ADDRESS FUKUGO ASSY	AWV1900
NSP	— ADR CONNECT A ASSY	AWZ6626
NSP	— ADR CONNECT B ASSY	AWZ6627
NSP	— ADR CONNECT C ASSY	AWZ6628
NSP	— ADR CONNECT D ASSY	AWZ6629
NSP	— RESONANCE ASSY	AWZ6691

	X DRIVE ASSY	AWV1901
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	Y DRIVE ASSY	AWV1902
	— SLOT CONNECTOR ASSY	AWZ6634
	— Y DRIVE ASSY	AWZ6645
	— SUB ADDRESS A ASSY	AWZ6689
	— SUB ADDRESS B ASSY	AWZ6690

	DIGITAL VIDEO ASSY	AWV1903
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	RGB VIDEO ASSY	AWV1904
	— I/O ASSY	AWZ6631
	— RGB ASSY	AWZ6632

	MX FUKUGO ASSY	AWV1905
	— CONTROL ASSY	AWZ6633
	— SP OUT L ASSY	AWZ6635
	— SP OUT R ASSY	AWZ6636
	— SIDE KEY ASSY	AWZ6637
	— KEY CONNECTOR ASSY	AWZ6638
	— THERMAL SENSOR ASSY	AWZ6639
	— MX LED ASSY	AWZ6642
	— IR ASSY	AWZ6643
	— MX AUDIO ASSY	AWZ6644

	V MID CLAMP ASSY	AWV1934
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#### PDA-5002

	VIDEO SLOT ST1 ASSY	AWV1906
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Mark	No.	Description	Part No.
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### SCAN (A) ASSY

#### SEMICONDUCTORS

IC6201-IC6206	SN755860PJ
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#### CAPACITORS

C6201, C6202, C6212, C6213 (0.1 $\mu$ F/250V)	ACG1088
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C6222, C6223, C6232, C6233 (0.1 $\mu$ F/250V)	ACG1088
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C6242, C6243, C6252, C6253 (0.1 $\mu$ F/250V)	ACG1088
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C6203, C6206, C6210, C6215, C6219 C6227, C6229, C6236, C6240, C6244 C6246, C6255, C6259, C6260 C6208, C6209, C6217, C6218, C6226 C6230, C6238, C6239, C6245, C6250	CCSRCH151J50 CCSRCH151J50 CCSRCH151J50 CCSRCH181J50 CCSRCH181J50
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C6257, C6258 C6204, C6205, C6207, C6214, C6216 C6220, C6224, C6225, C6231 C6234, C6235, C6237, C6248, C6249 C6251, C6254, C6256, C6262-C6266	CCSRCH181J50 CCSRCH390J50 CCSRCH390J50 CCSRCH390J50 CCSRCH390J50
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C6211, C6221, C6228, C6241, C6247 C6261	CKSRYF104Z16 CKSRYF104Z16
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#### RESISTORS

R6207, R6209, R6222, R6228, R6232 R6239 Other Resistors	RAB4C221J RAB4C221J RS1/16S□□□□
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#### OTHERS

CN6201 15P CONNECTOR	AKP1218
K6202, K6212, K6219, K6225, K6231 TEST PIN	AKX9002
K6239, K6244 TEST PIN	AKX9002

### SCAN (B) ASSY

#### SEMICONDUCTORS

IC6001-IC6006	SN755860PJ
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#### CAPACITORS

C6001, C6002, C6011, C6012 (0.1 $\mu$ F/250V)	ACG1088
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C6021, C6022, C6031, C6032 (0.1 $\mu$ F/250V)	ACG1088
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Mark	No.	Description	Part No.
	C6041,C6042,C6051,C6052	(0.1μF/250V)	ACG1088
	C6004,C6005,C6009,C6013,C6015		CCSRCH151J50
	C6026,C6027,C6038,C6040,C6044		CCSRCH151J50
	C6048,C6054,C6058,C6059		CCSRCH151J50
	C6007,C6008,C6014,C6019,C6025		CCSRCH181J50
	C6028,C6035,C6039,C6046,C6047		CCSRCH181J50
	C6056,C6057		CCSRCH181J50
	C6003,C6006,C6017,C6018,C6020		CCSRCH390J50
	C6023,C6024,C6029,C6033,C6034		CCSRCH390J50
	C6037,C6043,C6045,C6049,C6053		CCSRCH390J50
	C6055,C6060,C6062-C6066		CCSRCH390J50
	C6010,C6016,C6030,C6036,C6050		CKSRYF104Z16
	C6061		CKSRYF104Z16

**RESISTORS**

R6007,R6012,R6021,R6028,R6032	RAB4C221J
R6040	RAB4C221J
Other Resistors	RS1/16S□□□J

**OTHERS**

CN6001	15P CONNECTOR	AKP1218
K6001,K6012,K6018,K6025,K6031	TEST PIN	AKX9002
K6038,K6044	TEST PIN	AKX9002

**X CONNECTOR (A) ASSY****RESISTORS**

R6401	RS1/16S0R0J
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**X CONNECTOR (B) ASSY****RESISTORS**

R6451	RS1/16S0R0J
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**BRIDGE A ASSY****SEMICONDUCTORS**

D6421,D6422	D1FL20U(S)
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**CAPACITORS**

C6421,C6422 (0.1μF/100V)	ACG1098
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**OTHERS**

CN6421	PH CONNECTOR	B4B-PH-SM3
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**BRIDGE B ASSY****SEMICONDUCTORS**

D6431,D6432	D1FL20U(S)
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**CAPACITORS**

C6431,C6432 (0.1μF/100V)	ACG1098
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Mark	No.	Description	Part No.
<b>OTHERS</b>			
	CN6431	PH CONNECTOR	B4B-PH-SM3

**BRIDGE C ASSY****SEMICONDUCTORS**

D6441,D6442	D1FL20U(S)
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**CAPACITORS**

C6441,C6442 (0.1μF/100V)	ACG1098
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**OTHERS**

CN6441	PH CONNECTOR	B4B-PH-SM3
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**BRIDGE D ASSY****SEMICONDUCTORS**

D6451,D6452	D1FL20U(S)
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**CAPACITORS**

C6451,C6452 (0.1μF/100V)	ACG1098
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**OTHERS**

CN6451	PH CONNECTOR	B4B-PH-SM3
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**CLAMP A ASSY****SEMICONDUCTORS**

D6461,D6462	D1FL20U(S)
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**CAPACITORS**

C6461,C6462 (0.1μF/100V)	ACG1098
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**OTHERS**

CN6461	PH CONNECTOR	B4B-PH-SM3
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**CLAMP B ASSY****SEMICONDUCTORS**

D6471,D6472	D1FL20U(S)
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**CAPACITORS**

C6471,C6472 (0.1μF/100V)	ACG1098
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**OTHERS**

CN6471	PH CONNECTOR	B4B-PH-SM3
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**CLAMP C ASSY****SEMICONDUCTORS**

D6481,D6482	D1FL20U(S)
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**CAPACITORS**

C6481,C6482 (0.1μF/100V)	ACG1098
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# PDP-503CMX, PDP-503MXE, PDA-5002

Mark	No.	Description	Part No.
<b>OTHERS</b>			
	CN6481	PH CONNECTOR	B4B-PH-SM3

## CLAMP D ASSY

### SEMICONDUCTORS

D6491,D6492	D1FL20U(S)
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### CAPACITORS

C6491,C6492 (0.1μF/100V)	ACG1098
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### OTHERS

CN6491	PH CONNECTOR	B4B-PH-SM3
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## ADR CONNECT A ASSY

### SEMICONDUCTORS

IC6501	TC74VHC541FT
Q6502	2SC2712
Q6503	2SK209
D6501	DA227

### COILS

L6501,L6502 (22μH/0.11A)	ATH1081
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### CAPACITORS

C6511-C6520 (330pF/100V)	ACG1094
C6531,C6533,C6534 (47μF/6.3V)	ACH1341
C6536-C6538	CCSRCH121J50
C6506-C6510,C6521-C6525,C6532	CKSRYF104Z16
C6535	CKSRYF104Z16

### RESISTORS

R6518-R6522,R6524,R6526,R6528	RAB4C100J
R6530,R6531,R6533-R6537,R6539	RAB4C100J
R6541,R6543,R6545,R6547	RAB4C100J
R6516	RAB4C473J
Other Resistors	RS1/16S□□□□

### OTHERS

CN6501	55P CONNECTOR	AKM1202
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## ADR CONNECT B ASSY

### SEMICONDUCTORS

IC6601	TC74VHC541FT
Q6602	2SC2712
Q6603	2SK209
D6601	DA227

### COILS

L6601,L6602 (22μH/0.11A)	ATH1081
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### CAPACITORS

C6611-C6620 (330pF/100V)	ACG1094
C6631,C6633,C6634 (47μF/6.3V)	ACH1341
C6636-C6638	CCSRCH121J50
C6606-C6610,C6621-C6625,C6632	CKSRYF104Z16
C6635	CKSRYF104Z16

Mark	No.	Description	Part No.
RESISTORS			
	R6618-R6622,R6624,R6626,R6628	RAB4C100J	
	R6630,R6631,R6633-R6637,R6639	RAB4C100J	
	R6641,R6643,R6645,R6647	RAB4C100J	
	R6616	RAB4C473J	
	Other Resistors	RS1/16S□□□□	

### OTHERS

CN6601	55P CONNECTOR	AKM1202
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## ADR CONNECT C ASSY

### SEMICONDUCTORS

IC6801	TC74VHC541FT
Q6802	2SC2712
Q6803	2SK209
D6801	DA227

### COILS

L6801,L6802 (22μH/0.11A)	ATH1081
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### CAPACITORS

C6811-C6820 (330pF/100V)	ACG1094
C6831,C6833,C6834 (47μF/6.3V)	ACH1341
C6836-C6838	CCSRCH121J50
C6806-C6810,C6821-C6825,C6832	CKSRYF104Z16
C6835	CKSRYF104Z16

### RESISTORS

R6818-R6822,R6824,R6826,R6828	RAB4C100J
R6830,R6831,R6833-R6837,R6839	RAB4C100J
R6841,R6843,R6845,R6847	RAB4C100J
R6816	RAB4C473J
Other Resistors	RS1/16S□□□□

### OTHERS

CN6801	55P CONNECTOR	AKM1202
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## ADR CONNECT D ASSY

### SEMICONDUCTORS

IC6901	TC74VHC541FT
Q6902	2SC2712
Q6903	2SK209
D6901	DA227

### COILS

L6901,L6902 (22μH/0.11A)	ATH1081
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### CAPACITORS

C6911-C6920 (330pF/100V)	ACG1094
C6931,C6933,C6934 (47μF/6.3V)	ACH1341
C6936-C6938	CCSRCH121J50
C6906-C6910,C6921-C6925,C6932	CKSRYF104Z16
C6935	CKSRYF104Z16

### RESISTORS

R6918-R6922,R6924,R6926,R6928	RAB4C100J
R6930,R6931,R6933-R6937,R6939	RAB4C100J
R6941,R6943,R6945,R6947	RAB4C100J
R6916	RAB4C473J
Other Resistors	RS1/16S□□□□

Mark	No.	Description	Part No.
<b>OTHERS</b>			
	CN6901	55P CONNECTOR	AKM1202

## RESONANCE ASSY

### SEMICONDUCTORS

△	IC6704 (1A/50V)	ICP-S1.0
	IC6701-IC6703	TND301S
	Q6704,Q6705,Q6712	2SB1132
	Q6701-Q6703	2SD1664
	Q6710,Q6711	FS30ASJ-2
	Q6706-Q6709	FX20ASJ-2
	D6701,D6703,D6704,D6706-D6708	1SS355
	D6709,D6710,D6717,D6718	D1FL20U(S)
	D6711-D6714	SPX-62S
	D6702,D6705,D6716	UDZ15B

### COIL

L6704	CHOKE COIL	ATH1111
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### CAPACITORS

C6716,C6718 (1.00F)	ACE1159
C6720,C6721 (0.01μF/100V)	ACG1101
C6722 (0.0068F/100V)	ACG1102
C6703-C6708 (56μF/80V)	ACH1347
C6702,C6709	CEHV101M16
C6701	CEHV470M16
C6710,C6711,C6713	CKSRYF104Z16

### RESISTORS

All Resistors	RS1/16S□□□□
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### OTHERS

CN6701	23P CONNECTOR	AKP1221
CN6702	PH CONNECTOR	B4B-PH-SM3
CN6703	PH CONNECTOR	B5B-PH-SM3

## X DRIVE ASSY

### [X LOGIC BLOCK]

### SEMICONDUCTORS

IC3003	PE1012A
IC3004	TC74ACT540FT
IC3001,IC3008	TC74ACT541FT

### COIL

L3001	LFEA100J
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### CAPACITORS

C3005	CEHAT470M16
C3001,C3003,C3004,C3006	CKSRYF104Z50

### RESISTORS

R3009-R3012	RAB4C0R0J
R3001,R3003,R3026,R3029	RAB4C470J
R3002,R3005,R3030,R3033	RAB4C472J
Other Resistors	RS1/16S□□□□

Mark	No.	Description	Part No.
<b>OTHERS</b>			
	K3001,K3003,K3004,K3008,K3010	TEST PIN	AKX9002
	K3012-K3015,K3017,K3018	TEST PIN	AKX9002
	CN3001	30P CONNECTOR	KF050HA30L

### [X SUS BLOCK]

### SEMICONDUCTORS

IC3102	HCPL-M611
IC3200,IC3201	STK795-460
IC3101	TC74ACT541FT
IC3103,IC3104,IC3106,IC3107	TND301S
IC3110,IC3113	TND301S
IC3109	UPC78L05T
Q3117	2SJ181L
Q3116,Q3119,Q3120	2SJ522
Q3101	2SK2503
Q3103-Q3107,Q3109-Q3115	FS16VS-9
Q3124-Q3127	FS16VS-9
Q3123	FS2AS-14A
Q3122,Q3128	FS7VS-14A
Q3102,Q3118	HN1B04FU
D3119	1SS184
D3108,D3124,D3125,D3130,D3133	1SS355
D3101,D3102,D3117,D3126,D3131	D1FL40
D3200,D3202,D3203,D3205	D1FL40
D3207,D3208,D3210-D3215	D1FL40
D3120,D3127-D3129,D3135,D3136	UDZ15B

### COILS

L3206,L3207	ATH1112
RADIAL LEAD INDUCTOR	
L3201,L3204	CHOKE COIL
L3202,L3205,L3210,L3211	ATH1117
CHOKE COIL	ATH1118
L3101	LFEA100J
L3107,L3108	LFEA101J
L3103	LFEA470J

### CAPACITORS

C3205,C3206,C3212,C3213 (1.5μF)	ACE1160
C3225,C3226 (1.5μF)	ACE1160
C3131,C3139,C3143 (0.1μF/630V)	ACG1092
C3223,C3224 (100pF/500V)	ACG1100
C3132 (47μF/350V)	ACH1346
C3200-C3202,C3207-C3209	ACH1348
(330μF/315V)	
C3214-C3221	CCSRCH331J50
C3112,C3133,C3203,C3210	CEHAT101M16
C3102,C3107,C3115,C3204,C3211	CEHAT101M25
C3101	CEHAT221M25
C3104,C3106,C3134,C3141	CEHAT470M16
C3135	CEHAT470M25
C3103,C3105,C3108,C3109,C3111	CKSRYF104Z50
C3113,C3114,C3117,C3130,C3140	CKSRYF104Z50
C3147	CKSRYF104Z50

# PDP-503CMX, PDP-503MXE, PDA-5002

Mark	No.	Description	Part No.
<b>RESISTORS</b>			
	R3183,R3184,R3187 (15Ω)	ACN1156	
	R3113,R3114,R3121,R3122,R3126	RAB4C100J	
	R3132,R3140,R3141	RAB4C100J	
	R3212,R3217,R3230,R3234,R3237	RS1/10S184J	
	R3240,R3242,R3245	RS1/10S184J	
	R3250-R3253	RS1/16S3300F	
	R3134,R3163	RS1/2S100J	
	R3103	RS1/2S102J	
	R3109	RS1/2S2R2J	
	R3102	RS1/2S561J	
	R3215,R3216	RS1MMF101J	
	R3228,R3229	RS1MMF102J	
	R3202,R3203	RS1MMF563J	
	R3178,R3179	RS2MMF121J	
	VR3200-VR3203 (1kΩ)	ACP1089	
	Other Resistors	RS1/16S□□□□J	
<b>OTHERS</b>			
	SPACER	AEH1049	
	K3102-K3104 TEST PIN	AKX9002	
	KN3105-KN3114 GROUND PLATE	ANK-142	
	CN3101 13P PLUG	KM250MA13	
	CN3102 3P PLUG	KM250MA3	
<b>[X DD CON BLOCK]</b>			
<b>SEMICONDUCTORS</b>			
	IC3712	AN1431M	
	IC3701	MIP161	
	IC3702-IC3704	TLP181(GR)	
	Q3701	2SC2712	
	Q3800	HN1A01FU	
	D3710,D3711	1SS355	
	D3705,D3706	D1FL20U(S)	
	D3702	EC8FS6	
	D3708,D3709,D3713	RD110P	
	D3703	UDZ18B	
	D3707	UDZS5.6B	
<b>COIL</b>			
	L3701 RADIAL LEAD INDUCTOR	ATH1110	
<b>CAPACITORS</b>			
	C3701 (22μF/315V)	ACH1345	
	C3717 (47μF/350V)	ACH1346	
	C3704	CEHAT101M16	
	C3706,C3711,C3714	CEHAT101M25	
	C3712	CEHAT331M16	
	C3705	CKSQYF104Z50	
	C3703,C3707,C3708,C3710	CKSRYB104K16	
	C3715,C3716	CKSRYB104K16	
<b>RESISTORS</b>			
	R3732	RS1/16S1001F	
	R3806	RS1/16S1802F	
	R3701-R3704,R3706-R3717	RS1/16S1803F	
	R3805	RS1/16S2702F	
	R3731	RS1/16S3900F	

Mark	No.	Description	Part No.
	R3802		RS1/16S5601F
	R3738,R3739		RS1/2S102J
	R3800,R3801		RS1/2S823J
	VR3701 (1kΩ)		ACP1089
	Other Resistors		RS1/16S□□□□J
<b>OTHERS</b>			
	T3701 VRN TRANSFORMER	ATK1153	
	SCREW	PMB30P060FNI	
<b>Y DRIVE ASSY</b>			
<b>[Y DRIVE LOGIC BLOCK]</b>			
<b>SEMICONDUCTORS</b>			
	IC2006	PE1013A	
	IC2007	TC74ACT540FT	
	IC2001,IC2003-IC2005	TC74ACT541FT	
	Q2101,Q2102	HN1C01FU	
	D2101	1SS355	
<b>COIL</b>			
	L2001	LFEA100J	
<b>CAPACITORS</b>			
	C2101	CEHAT100M50	
	C2103	CEHAT1R0M50	
	C2003	CEHAT470M16	
	C2001,C2004,C2005,C2007,C2008	CKSRYF104Z50	
	C2010,C2102,C2104	CKSRYF104Z50	
<b>RESISTORS</b>			
	R2015-R2018	RAB4C0R0J	
	R2001,R2002,R2005,R2011	RAB4C470J	
	R2037,R2038	RAB4C470J	
	R2035,R2036,R2039,R2040	RAB4C472J	
	Other Resistors	RS1/16S□□□□J	
<b>OTHERS</b>			
	CN2001 50P CONNECTOR	AKM1201	
	K2001-K2005,K2009,K2010,K2013	AKX9002	
	TEST PIN		
	K2021,K2027-K2029,K2037	AKX9002	
	TEST PIN		
	K2039-K2041,K2053 TEST PIN	AKX9002	
	2101 SENSOR	AXX1057	
	SCREW	BMZ20P040FMC	
	NUT	NB20FMC	
<b>[Y DRIVE SUS BLOCK]</b>			
<b>SEMICONDUCTORS</b>			
	IC2202,IC2208	HCPL-M611	
	IC2206,IC2214	STK795-460	
	IC2201	TC74ACT541FT	
	IC2203,IC2204,IC2210,IC2212	TND301S	
	IC2213,IC2216,IC2217	TND301S	
	IC2205,IC2209	UPC78L05T	
	Q2203-Q2205	2SJ522	
	Q2201	2SK2503	
	Q2215-Q2221,Q2226-Q2228	FQB34N20	
	Q2232,Q2233	FQB34N20	



Mark	No.	Description	Part No.
	Q2210-Q2212		FS16VS-9
	Q2209		HN1B04FU
	D2225		1SS184
	D2202,D2204		1SS226
	D2211		1SS355
	D2215,D2228		D1FL20U(S)
	D2201,D2203,D2205,D2208,D2210		D1FL40
	D2212,D2214,D2216,D2221-D2223		D1FL40
	D2226,D2227,D2239,D2243		D1FL40
	D2209		DF20L60
	D2206,D2207		UDZ15B

## COILS

L2207	RADIAL LEAD INDUCTOR	ATH1110
L2213,L2214		ATH1112
	RADIAL LEAD INDUCTOR	
L2206,L2211	CHOKE COIL	ATH1117
L2208,L2212,L2215,L2216		ATH1118
	CHOKE COIL	
L2210		LFEA100J
L2203,L2205		LFEA101J
L2201,L2204		LFEA470J

## CAPACITORS

C2228,C2230,C2231,C2250-C2252	ACE1160
(1.5μF)	
C2209,C2210 (0.1μF/630V)	ACG1092
C2233,C2248 (100pF/500V)	ACG1100
C2211 (47μF/350V)	ACH1346
C2216,C2217,C2219,C2234-C2236	ACH1348
(330μF/315V)	
C2253-C2260	CCSQCH331J50
C2221,C2225,C2226,C2246	CEHAT101M16
C2204,C2227,C2237,C2240,C2247	CEHAT101M25
C2202	CEHAT221M25
C2232	CEHAT331M2A
C2218,C2224,C2229	CEHAT470M16
C2212,C2214	CEHAT470M25
C2201,C2203,C2205,C2208,C2213	CKSRYF104Z50
C2220,C2222,C2223,C2238,C2239	CKSRYF104Z50
C2241,C2242	CKSRYF104Z50

## RESISTORS

R2235,R2273,R2291,R2305,R2315	RAB4C100J
R2317,R2342	RAB4C100J
R2253,R2256,R2270,R2283,R2332	RS1/10S184J
R2338,R2354,R2355	RS1/10S184J
R2358-R2361	RS1/16S3300F
R2263,R2264	RS1/2S100J
R2203	RS1/2S102J
R2209	RS1/2S2R2J
R2202	RS1/2S561J
R2278,R2303	RS1MMF101J
R2233,R2234	RS1MMF102J
R2274,R2275	RS1MMF221J
R2298,R2299	RS2MMF4R7J
R2277	RS3PMFR47J
R2276	RS3PMFR56J
VR2201-VR2204 (1kΩ)	ACP1089
Other Resistors	RS1/16S□□□J

Mark	No.	Description	Part No.
<b>OTHERS</b>			
		SPACER	AEH1049
	K2211,K2214-K2217	TEST PIN	AKX9002
	KN2201-KN2210	GROUND PLATE	ANK-142
	CN2201	15P PLUG	KM250MA15
	CN2202	3P PLUG	KM250MA3

## [Y DRIVE SCAN BLOCK]

### SEMICONDUCTORS

IC2501,IC2502,IC2505,IC2510	HCPL-M611
IC2512-IC2514,IC2516,IC2525	HCPL-M611
IC2503,IC2504,IC2506	TC74ACT540FT

## COILS

L2501-L2503	LFEA100J
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## CAPACITORS

C2506,C2527	CEHAT220M2D
C2502	CEHAT221M16
C2524,C2525	CEHAT470M16
C2501,C2503-C2505,C2507,C2508	CKSRYF104Z50
C2513,C2515-C2517,C2519,C2530	CKSRYF104Z50

## RESISTORS

R2502,R2504	RAB4C101J
Other Resistors	RS1/16S□□□J

## OTHERS

CN2501,CN2502	15P CONNECTOR	AKM1200
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## [Y DRIVE DD-CON BLOCK]

### SEMICONDUCTORS

IC2715-IC2717	AN1431M
IC2709	HCNR201
IC2708,IC2710,IC2718	M5223AFP
IC2711	MIP0223SC
IC2701	MIP161
IC2704	MIP301
IC2702,IC2703,IC2705-IC2707	TLP181(GR)
IC2712-IC2714	TLP181(GR)
Q2701,Q2703	2SC2712
Q2704	HN1A01FU
D2712,D2717,D2718,D2732,D2734	1SS355
D2736,D2737	1SS355
D2704,D2706,D2707,D2715,D2726	D1FL20U(S)
D2728	D1FL20U(S)
D2702,D2714,D2727	D1FL40
D2711	D1FS4
D2725	EC8FS6
D2733	RD110P
D2724	U1ZB330
D2713	U1ZB36
D2740	UDZ12B
D2709,D2716	UDZ3.6B
D2729,D2731	UDZ33B
D2703,D2710	UDZ36B
D2720,D2730,D2739	UDZS5.6B

# PDP-503CMX, PDP-503MXE, PDA-5002

Mark	No.	Description	Part No.
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## COILS

L2701	RADIAL LEAD INDUCTOR	ATH1110
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## CAPACITORS

C2701,C2735 (22μF/315V)	ACH1345
C2706,C2725,C2737	CEHAT101M16
C2709,C2718,C2720,C2739,C2745	CEHAT101M25
C2708	CEHAT101M2A
C2740	CEHAT101M2C

C2704	CEHAT221M25
C2715	CEHAT331M16
C2746	CEHAT331M25
C2723,C2751	CEHAT470M16
C2712	CEHAT471M35

C2711	CKSRYB103K50
C2705,C2713,C2714,C2719	CKSRYB104K16
C2721,C2722,C2724,C2727,C2729	CKSRYB104K16
C2731,C2733,C2736,C2742,C2743	CKSRYB104K16
C2747-C2749	CKSRYB104K16

C2728,C2730	CKSRYB471K50
C2707,C2738	CKSRYF104Z50

## RESISTORS

R2735,R2791	RS1/16S1000F
R2780	RS1/16S1103F
R2715,R2728,R2733	RS1/16S1201F
R2787	RS1/16S1302F
R2766	RS1/16S1501F

R2785	RS1/16S1503F
R2777,R2786	RS1/16S1802F
R2776	RS1/16S2702F
R2705,R2706,R2709,R2710,R2778	RS1/16S3002F
R2781	RS1/16S3002F

R2783	RS1/16S4701F
R2734,R2736	RS1/16S4702F
R2779	RS1/16S5102F
R2773	RS1/16S5601F
R2784	RS1/16S5602F

R2782	RS1/16S6801F
R2744-R2746,R2748-R2753	RS1/16S9102F
R2711,R2716,R2767,R2770	RS1/2S102J
R2788,R2792	RS1/2S561J
R2771,R2772	RS1/2S823J

R2712	RS3LMF272J
VR2702,VR2703 (1kΩ)	ACP1089
VR2701 (2.2kΩ)	ACP1090
Other Resistors	RS1/16S□□□J

## OTHERS

T2702	SMD TRANSFORMER	ATK1150
T2703	VH TRANSFORMER	ATK1151
T2701	VOFS TRANSFORMER	ATK1152
	SCREW	PMB30P060FNI

## SLOT CONNECTOR ASSY

### OTHERS

CN8102	SOCKET 120P	AKP1219
CN8101	PCI SOCKET 120P	AKP1220
KN8101,KN8102	GROUND PLATE	ANK1664

Mark	No.	Description	Part No.
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## SUB ADDRESS A ASSY

### SEMICONDUCTORS

IC8801,IC8802,IC8804	M5223AFP
IC8803	TC74VHC74FT
Q8801,Q8802	2SA1163
Q8803-Q8805,Q8808	2SC2712
Q8806	2SK209

D8801-D8803,D8809	1SS355
D8806,D8807	DA227
D8808	UDZ27B
D8804	UDZS5.1B

### COILS

L8801 CHOKE COIL (100μH/0.45A)	ATH1074
L8802,L8803 COIL (22μH/0.11A)	ATH1081

### CAPACITORS

C8806	CCSRCH101J50
C8822	CEHV100M16
C8804	CEHV100M35
C8801,C8808	CEHV470M16
C8807	CEVNP2R2M35

C8802,C8803,C8805,C8809-C8817	CKSRYF104Z16
C8820,C8821	CKSRYF104Z16

### RESISTORS

R8806,R8807,R8837,R8838,R8841	RS1/16S1002D
R8858	RS1/16S1202D
R8864	RS1/16S1802F
R8828,R8829,R8846	RS1/16S2202D
R8826,R8827,R8839,R8840	RS1/16S4701D

R8833,R8859	RS1/16S4702F
R8832	RS1/16S5602F
R8801,R8802	RS1/2S1R5J
R8803-R8805	RS1/2S2R2J
Other Resistors	RS1/16S□□□J

### OTHERS

CN8803	23P CONNECTOR	AKM1205
CN8801	PH CONNECTOR	S3B-PH-SM3
CN8802	PH CONNECTOR	S8B-PH-SM3

## SUB ADDRESS B ASSY

### SEMICONDUCTORS

IC8901,IC8902,IC8904	M5223AFP
IC8903	TC74VHC74FT
Q8901,Q8902	2SA1163
Q8903-Q8905,Q8908	2SC2712
Q8906	2SK209

D8901-D8903,D8909	1SS355
D8906,D8907	DA227
D8908	UDZ27B
D8904	UDZS5.1B

### COILS

L8901 CHOKE COIL (100μH/0.45A)	ATH1074
L8902,L8903 COIL (22μH/0.11A)	ATH1081

Mark	No.	Description	Part No.
<b>CAPACITORS</b>			
	C8906		CCSRCH101J50
	C8922		CEHV100M16
	C8904		CEHV100M35
	C8901,C8908		CEHV470M16
	C8907		CEVNP2R2M35
	C8902,C8903,C8905,C8909-C8917		CKSRYF104Z16
	C8920,C8921		CKSRYF104Z16

#### RESISTORS

R8906,R8907,R8937,R8938,R8941	RS1/16S1002D
R8958	RS1/16S1202D
R8964	RS1/16S1802F
R8928,R8929,R8946	RS1/16S2202D
R8926,R8927,R8939,R8940	RS1/16S4701D
R8933,R8959	RS1/16S4702F
R8932	RS1/16S5602F
R8901,R8902	RS1/2S1R5J
R8903-R8905	RS1/2S2R2J
Other Resistors	RS1/16S□□□□J

#### OTHERS

CN8903	23P CONNECTOR	AKM1205
CN8901	PH CONNECTOR	S3B-PH-SM3
CN8902	PH CONNECTOR	S8B-PH-SM3

### DIGITAL VIDEO ASSY

#### [INTERFACE BLOCK]

#### SEMICONDUCTORS

IC1001-IC1008	TC74VHC541FT
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#### FILTERS

F1001-F1006	EMI FILTER	ATF1194
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#### CAPACITORS

C1001-C1008	CKSRYF104Z16
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#### RESISTORS

R1044	RAB4C101J
R1001-R1007,R1036,R1063-R1069	RAB4C103J
R1008-R1017,R1019,R1020,R1027	RAB4C470J
R1032,R1034,R1035,R1037,R1038	RAB4C470J
R1040-R1043,R1048,R1049	RAB4C470J
R1051-R1054	RAB4C470J
Other Resistors	RS1/16S□□□□J

#### OTHERS

CN1003,CN1004	50P CONNECTOR	AKM1201
K1001	TEST PIN	AKX9002
CN1001	PH CONNECTOR	B12B-PH-SM3

#### [PANEL UCOM BLOCK]

#### SEMICONDUCTORS

IC1101	HD64F2328VF
IC1103	NC7SZ08P5
IC1102	PST9228N
Q1101,Q1103	DTC143EK
D1101	AEL1171

Mark	No.	Description	Part No.
<b>CAPACITORS</b>			
	C1123,C1124		CCSRCH7R0D50
	C1101		CEV101M4
	C1102,C1109,C1110,C1112-C1116		CKSRYB102K50
	C1129-C1132		CKSRYB102K50
	C1117,C1121		CKSRYB103K50
	C1120		CKSRYB472K50
	C1103-C1108,C1111,C1118,C1119		CKSRYF104Z16
	C1122,C1125-C1128		CKSRYF104Z16

#### RESISTORS

R1104,R1107,R1110,R1113,R1114	RAB4C472J
R1116,R1121,R1124,R1127,R1129	RAB4C472J
Other Resistors	RS1/16S□□□□J

#### OTHERS

K1101-K1105,K1107,K1108	AKX9002
TEST PIN	
X1101	CERAMIC RESONATOR ASS1160 (25MHz)

#### [MODULE UCOM BLOCK]

#### SEMICONDUCTORS

IC1204	24LC04B(I)SN
IC1208	PST9246N
IC1202	TC74VHC08FT
IC1201	TC74VHC21FT
IC1205	TC74VHC541FT
IC1203	TC74VHCT541AFT
IC1206	TC7W126FU
D1201,D1202	1SS355

#### CAPACITORS

C1213,C1243-C1245	CCSRCH470J50
C1235,C1236	CCSRCH7R0D50
C1225,C1232	CEV470M6R3
C1201-C1203,C1206-C1211	CKSRYB102K50
C1214-C1216,C1218,C1219	CKSRYB102K50
C1223,C1224,C1226,C1227,C1229	CKSRYB102K50
C1237,C1238,C1241,C1242,C1247	CKSRYB102K50
C1234	CKSRYB103K50
C1233	CKSRYB472K50
C1204,C1205,C1212,C1217	CKSRYF104Z16
C1221,C1222,C1228,C1230,C1231	CKSRYF104Z16
C1239,C1240,C1246,C1248-C1250	CKSRYF104Z16

#### RESISTORS

R1209,R1214,R1245	RAB4C101J
R1242	RAB4C103J
R1207	RAB4C123J
R1213,R1216	RAB4C473J
Other Resistors	RS1/16S□□□□J

#### OTHERS

X1201	CERAMIC RESONATOR ASS1159 (16MHz)	
CN1203	PH CONNECTOR	B3B-PH-SM3
CN1201.CN1202	8P PLUG	CKS3130

# PDP-503CMX, PDP-503MXE, PDA-5002

Mark	No.	Description	Part No.
<b>[DIGITAL BLOCK]</b>			
<b>SEMICONDUCTORS</b>			
	IC1802		FS781BZB
	IC1704		NC7SZ08P5
	IC1301,IC1401		PD6358A
	IC1703		PE5064A
	IC1501,IC1502,IC1601,IC1602		TC74VCX541FT
	IC1702,IC1801		TC74VHC541FT
	IC1803		TC74VHC74FT
	IC1701		TC74VHCT541AFT
	D1301-D1305		1SS226
<b>FILTERS</b>			
	F1301-F1304,F1501-F1505		ATF1194
	EMI FILTER		
	F1601-F1605 EMI FILTER		ATF1194
<b>CAPACITORS</b>			
	C1807		CCSRCH271J50
	C1802		CEV100M16
	C1306,C1322,C1406,C1422,C1711		CEV101M4
	C1806		CEV101M4
	C1504-C1508,C1604-C1608,C1712		CKSRYB102K50
	C1303-C1305,C1307-C1321		CKSRYF104Z16
	C1323-C1336,C1403-C1405		CKSRYF104Z16
	C1407-C1421,C1423-C1436,C1501		CKSRYF104Z16
	C1503,C1601,C1603,C1701-C1710		CKSRYF104Z16
	C1713,C1803-C1805		CKSRYF104Z16
<b>RESISTORS</b>			
	R1502,R1517,R1606,R1622		RAB4C101J
	R1307,R1310-R1315,R1317,R1318		RAB4C220J
	R1321,R1322,R1326-R1344,R1407		RAB4C220J
	R1410-R1415,R1417,R1418		RAB4C220J
	R1421,R1422,R1426-R1444		RAB4C220J
	R1501,R1514,R1607,R1627,R1701		RAB4C470J
	R1703-R1709,R1712-R1717		RAB4C470J
	R1551,R1552		RS1/2S680J
	Other Resistors		RS1/16S□□□□
<b>OTHERS</b>			
	CN1701 50P CONNECTOR		AKM1201
	CN1501,CN1502,CN1504,CN1505		AKM1202
	55P CONNECTOR		
	CN1601,CN1602,CN1604,CN1605		AKM1202
	55P CONNECTOR		
	K1301,K1302,K1308,K1311-K1314		AKX9002
	TEST PIN		
	K1316,K1321,K1324,K1326-K1331		AKX9002
	TEST PIN		
	K1333,K1501,K1502,K1601,K1602		AKX9002
	TEST PIN		
	K1728,K1729 TEST PIN		AKX9002
	X1801 CRYSTAL RESONATOR		ASS1146
	(50.000MHz)		
	CN1503,CN1603 PH CONNECTOR		B8B-PH-SM3
	CN1301 8P PLUG		CKS3130
	CN1702 30P CONNECTOR		KF050HA30L

Mark	No.	Description	Part No.
<b>[D-D CONVERTER BLOCK]</b>			
<b>SEMICONDUCTORS</b>			
	Q1902,Q1905,Q1907		2SC2712
	Q1903		DTC143EK
	Q1901,Q1904,Q1906		HN1C01FU
	D1903-D1906,D1911,D1912		1SS355
	D1908		HZU2.2B
	D1902,D1909		UDZ3.6B
	D1907		UDZS5.1B
	D1901		UDZS6.8B
<b>CAPACITORS</b>			
	C1904,C1906,C1912		CEV220M16
	C1901-C1903,C1905,C1907-C1911		CKSRYF104Z16
<b>RESISTORS</b>			
	R1935,R1936		RS1/2S680J
	R1937		RS2LMF390J
	Other Resistors		RS1/16S□□□□
<b>OTHERS</b>			
	K1901-K1906 TEST PIN		AKX9002
	1901 DC- DC CONVERTER		AXY1052
	CN1901 PH CONNECTOR		B13B-PH-SM3
<b>I/O ASSY</b>			
<b>[I/O BLOCK]</b>			
<b>SEMICONDUCTORS</b>			
	IC4003		PQ05DZ11
	IC4002		PQ09DZ11
	IC4004		PQ12DZ11
	IC4005,IC4006		PQ3DZ13
	IC4001		TA79L05F
<b>CAPACITORS</b>			
	C4027		CEHAT100M50
	C4012,C4020,C4024		CEHAT101M10
	C4008		CEHAT101M16
	C4001,C4004,C4005,C4009,C4013		CEHAT470M16
	C4016,C4017		CEHAT470M16
	C4002,C4003,C4006,C4007		CKSRYF104Z16
	C4010,C4011,C4014,C4015		CKSRYF104Z16
	C4018,C4019,C4022,C4023		CKSRYF104Z16
	C4026		CKSRYF105Z10
<b>RESISTORS</b>			
	R4001,R4003,R4004,R4007		RS1MMF1R0J
	R4002		RS1MMF8R2J
<b>OTHERS</b>			
	CN4002 15P PLUG		KM200NA15
<b>[RGB I/O BLOCK]</b>			
<b>SEMICONDUCTORS</b>			
	IC4110		24LCS21A
	IC4108		BA7657F
	IC4107,IC4111		LT1399CS
	IC4104		TA7630P
	IC4103,IC4105		TC4052BF

Mark	No.	Description	Part No.
	IC4109		TC74VHCT541AFT
	IC4101,IC4102		UPC4570G2
	Q4114		2SC2412K
	Q4102		DTA143EK
	Q4103,Q4117		DTC143EK
	Q4104-Q4106,Q4108,Q4111,Q4112		HN1B04FU
	Q4101,Q4113		HN1C01FU
	Q4115,Q4116		UMY1N
	D4111		1SS184
	D4105-D4107,D4114-D4116		1SS226
	D4119,D4120		1SS226
	D4121		1SS352
	D4110		RD6.8MB
	D4108,D4109,D4112,D4113		UDZS5.6B
	D4122,D4123		UDZS5.6B

**SWITCH**

S4101	ASH1029
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**CAPACITORS**

C4144,C4145,C4155,C4156	CCSRCH220J50
C4109,C4117	CCSRCH221J50
C4166	CEHAT100M50
C4137,C4161,C4169	CEHAT101M10
C4120,C4124,C4135,C4136	CEHAT470M16
C4139,C4140,C4143,C4150	CEHAT470M16
C4153,C4154,C4157,C4174-C4176	CEHAT470M16
C4167	CEHAT4R7M50
C4101,C4104,C4106,C4110,C4111	CKSQYB105K10
C4114,C4118,C4127,C4165	CKSQYB105K10
C4170,C4171	CKSQYB105K10
C4129,C4130,C4133,C4134,C4142	CKSRYB103K50
C4149,C4151,C4152,C4177-C4179	CKSRYB103K50
C4108,C4116	CKSRYB222K50
C4146	CKSRYB471K50
C4125,C4126	CKSRYB472K50
C4107,C4119,C4121-C4123,C4128	CKSRYF104Z16
C4147,C4158-C4160,C4162-C4164	CKSRYF104Z16
C4168,C4180-C4182	CKSRYF104Z16

**RESISTORS**

R4188-R4190	RS1/16S1001F
R4271-R4273	RS1/16S1101F
R4185,R4186,R4213,R4214	RS1/16S2201F
R4165,R4166,R4180,R4210-R4212	RS1/16S75R0F
R4262,R4263	RS1/2S750J
Other Resistors	RS1/16S□□□□J

**OTHERS**

CN4101,CN4102	AKN1069
STEREO MINI JACK	
CN4103,CN4104 D-SUB SOCKET	AKP1214
CN4105 BNC SOCKET	AKX1055

**RGB ASSY****[MATRIX BLOCK]****SEMICONDUCTORS**

IC4402	CXA2101AQ
IC4403	ML6426CS-1
IC4404	NJM072BM-E
Q4407-Q4409	2SA1037K
Q4413	2SC2412K

Mark	No.	Description	Part No.
	Q4412		HN1A01FU
	Q4404		HN1B04FU
	Q4410		HN1C01FU
	D4401		1SS226

**CAPACITORS**

C4406,C4412,C4458	CEHAT100M50
C4405	CEHAT101M16
C4456	CEHAT470M16
C4437,C4451-C4453	CKSQYB105K10
C4407,C4409,C4410,C4428,C4429	CKSQYB474K16
C4431,C4432,C4434-C4436,C4445	CKSQYB474K16
C4448	CKSQYB474K16
C4421-C4423,C4426	CKSRYB104K16
C4408	CKSRYB222K50
C4411,C4414-C4418,C4420,C4424	CKSRYF104Z16
C4427,C4430,C4433,C4438-C4444	CKSRYF104Z16
C4446,C4447,C4449,C4450,C4455	CKSRYF104Z16
C4457	CKSRYF104Z16

**RESISTORS**

R4422,R4425,R4426	RAB4C103J
R4483	RS1/16S1003F
R4476	RS1/16S1004F
R4448	RS1/16S2202F
R4437	RS1/16S2204F
R4494	RS1/16S3901F
R4482	RS1/16S4701F
R4455	RS1/16S4702F
R4489	RS1/16S5601F
Other Resistors	RS1/16S□□□□J

**[AD/PLL/AMP BLOCK]****SEMICONDUCTORS**

IC4603	CXA3516R
IC4605	NJM072BM-E
IC4604	TC74HC4066AF
IC4601	TC74LCX125FT
IC4602	TC7WH04FU
Q4601,Q4602	2SC2412K
Q4608	2SK208
Q4607	DTC124EK
Q4604-Q4606	HN1B04FU
Q4603	HN1C01FU
D4601-D4605	1SS355

**CAPACITORS**

C4680	CCCCCH220J50
C4623	CCSRCH101J50
C4615	CCSRCH220J50
C4626,C4669	CCSRCH221J50
C4620	CCSRCH331J50
C4604,C4607,C4614,C4638	CEHAT101M10
C4651,C4652,C4656,C4668	CEHAT101M10
C4622	CFTLA105J50
C4675	CKSQYB184K16
C4662	CKSRYB102K50
C4608,C4619,C4627,C4628	CKSRYB104K16
C4634,C4635,C4639,C4640	CKSRYB104K16
C4610,C4647	CKSRYB105K6R3
C4601,C4605,C4606,C4609	CKSRYF104Z16
C4611-C4613,C4616-C4618	CKSRYF104Z16

# PDP-503CMX, PDP-503MXE, PDA-5002

Mark	No.	Description	Part No.
	C4624,C4625,C4629-C4633		CKSRYF104Z16
	C4636,C4637,C4641-C4646		CKSRYF104Z16
	C4648-C4650,C4653-C4655		CKSRYF104Z16
	C4657-C4661,C4663,C4677-C4679		CKSRYF104Z16

## RESISTORS

R4612,R4623,R4625,R4629,R4632	RAB4C101J
R4636,R4639,R4641,R4643,R4647	RAB4C101J
R4653,R4657	RAB4C101J
R4635	RN1/16SE3001D
R4630	RS1/16S2201F
R4676,R4715	RS1/16S2204F
R4626	RS1/16S2701F
R4631	RS1/16S3301F
VR4701 (4.7kΩ)	ACP1091
Other Resistors	RS1/16S□□□J

## [SYNC CONTROL BLOCK]

### SEMICONDUCTORS

IC4802	M52346SP
IC4801	NJM2234M
IC4803	PDY077E
Q4806	2SC2412K
Q4808,Q4809	DTC124EK
Q4803	HN1A01FU
Q4807	HN1B04FU
Q4802	HN1C01FU
D4807,D4808	1SS184
D4801,D4802	1SS226

### FILTERS

F4801,F4802	EMI FILTER	ATF1194
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### CAPACITORS

C4863,C4864	CCSRCH151J50
C4801,C4805	CCSRCH220J50
C4821,C4833	CCSRCH221J50
C4804	CCSRCH470J50
C4807,C4810,C4823	CEHAT100M50
C4812,C4844	CEHAT101M10
C4803,C4806,C4815	CEHAT470M16
C4817,C4822	CEHAT4R7M50
C4816	CKSQYB105K10
C4829	CKSRYB472K50
C4802,C4808,C4811,C4813,C4814	CKSRYF104Z16
C4819,C4820,C4830,C4831,C4836	CKSRYF104Z16
C4839,C4842,C4843,C4850,C4861	CKSRYF104Z16
C4860	CKSRYF105Z10

## RESISTORS

R4814,R4818,R4835,R4915	RAB4C101J
R4913	RAB4C102J
R4809	RAB4C152J
R4825	RAB4C471J
R4808,R4943	RAB4C472J
R4864	RS1/16S1802F
R4865	RS1/16S2702F
R4868	RS1/16S4702F
Other Resistors	RS1/16S□□□J

Mark	No.	Description	Part No.
<b>OTHERS</b>			
	K4801,K4802,K4805,K4806		AKX9002
	TEST PIN		
	K4809,K4810	TEST PIN	AKX9002
	CN4801	8P PLUG	CKS3130

## [IP BLOCK]

### SEMICONDUCTORS

IC5101,IC5103	MS82V16520-8GA
IC5102	PE5066A
IC5001	PE5067A

### CAPACITORS

C5017,C5121	CCSRCH220J50
C5006	CEHAT101M10
C5015,C5016	CEHAT221M6R3
C5001-C5005,C5007-C5013	CKSRYF104Z16
C5101-C5120	CKSRYF104Z16

### RESISTORS

All Resistors	RS1/16S□□□J
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### OTHERS

5002	HEAT SINK FOR IC	ANH1574
5001	HEAT SINK L FOR IC	ANH1576

## [DIGITAL SELECT BLOCK]

### SEMICONDUCTORS

IC5201-IC5207	TC74LCX541FT
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### CAPACITORS

C5201-C5207	CKSRYF104Z16
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### RESISTORS

R5213	RAB4C103J
R5201-R5212,R5215,R5217	RAB4C470J
Other Resistors	RS1/16S□□□J

### OTHERS

J5203	10P HOUSING WIRE	ADX2706
J5204	11P HOUSING WIRE	ADX2707
CN5201	120P PLUG	AKM1203

## [IC30 BLOCK]

### SEMICONDUCTORS

IC5302,IC5303	MS82V16520-8GA
IC5301	PD6357B

### CAPACITORS

C5301,C5308	CEHAT101M10
C5302-C5307,C5309-C5322,C5324	CKSRYF104Z16

### RESISTORS

All Resistors	RS1/16S□□□J
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Mark	No.	Description	Part No.
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**OTHERS**

K5314-K5317	TEST PIN	AKX9002
X5301	CRYSTAL RESONATOR (100.00MHz)	ASS1161

**[MAIN UCOM BLOCK]****SEMICONDUCTORS**

IC5502	24LC64(I)SN
IC5504,IC5509	74VHCT00AMTC
IC5512	LM50CIM3
IC5511	M5223AFP
IC5510	PST9246N
IC5503	TC74VHC541FT
IC5501	TC74VHCT541AFT
IC5506,IC5507	TC7W126FU
Q5501	2SJ461
Q5502,Q5503	DTA143EK
Q5504	HN1A01FU

**CAPACITORS**

C5512,C5513,C5521,C5534	CCSRCH220J50
C5526,C5527	CCSRCH7R0D50
C5545	CEHAT100M50
C5528,C5533	CEHAT470M16
C5507,C5508,C5518,C5522	CKSRYB102K50
C5529-C5531,C5536,C5537	CKSRYB102K50
C5535,C5538,C5539	CKSRYB221K50
C5524	CKSRYB472K50
C5525	CKSRYF103Z50
C5502-C5505,C5509,C5514-C5517	CKSRYF104Z16
C5519,C5520,C5523,C5532	CKSRYF104Z16
C5542-C5544	CKSRYF105Z10

**RESISTORS**

R5503,R5509,R5510	RAB4C101J
R5535	RAB4C103J
R5504,R5526	RAB4C473J
R5569	RS1/16S1001F
R5571	RS1/16S1800F
R5566	RS1/16S3001F
R5563	RS1/16S5101F
Other Resistors	RS1/16S□□□□J

**OTHERS**

CN5506	30P PLUG	AKM1204
K5501,K5502,K5508-K5510,K5512	TEST PIN	AKX9002
K5515,K5516,K5518	TEST PIN	AKX9002
X5501	CERAMIC RESONATOR (16MHz)	ASS1159
CN5501,CN5502	8P PLUG	CKS3130

**[WIDE UCOM BLOCK]****SEMICONDUCTORS**

IC5601	HD64F2328VF
IC5604	NC7SZ08P5
IC5603	PST9228N
IC5605	TC7SH32FU
IC5607,IC5608	TC7WH74FU

Mark	No.	Description	Part No.
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**CAPACITORS**

C5601	CCSRCH102J50
C5615,C5616	CCSRCH7R0D50
C5611	CKSRYB472K50
C5612	CKSRYF103Z50
C5604,C5606,C5608,C5610,C5613	CKSRYF104Z16
C5617-C5619	CKSRYF104Z16

**RESISTORS**

R5603,R5604	RAB4C103J
Other Resistors	RS1/16S□□□□J

**OTHERS**

X5601	CERAMIC RESONATOR (25MHz)	ASS1160
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**[DIGITAL I/F BLOCK]****SEMICONDUCTORS**

IC5701	TC7WH123FU
IC5702	TC7WH74FU
D5701	1SS352

**CAPACITORS**

C5703	CCSRCH471J50
C5701,C5702	CKSRYF104Z16

**RESISTORS**

R5701-R5707,R5709,R5712-R5719	RAB4C101J
R5721	RAB4C101J
R5730	RS1/16S1003F
Other Resistors	RS1/16S□□□□J

**OTHERS**

CN5701,CN5702	AKM1201
50P CONNECTOR	

**MX AUDIO ASSY****[MX AUDIO BLOCK]****SEMICONDUCTORS**

IC8601	BA5417
Q8602	2SA1037K
Q8603,Q8605,Q8607	2SC2412K
Q8606	DTC143EK
Q8601	HN1B04FU
Q8604	RN1901

**COILS**

L8602,L8603	AF CHOKE COIL	ATH-059
L8601	CHIP CHOKE COIL	ATH9003

**CAPACITORS**

C8602,C8617	CEAT101M16
C8606,C8607	CEAT101M25
C8610	CEAT221M16
C8605,C8613,C8614	CEAT470M35
C8609,C8615,C8622	CEAT471M25

# PDP-503CMX, PDP-503MXE, PDA-5002

Mark	No.	Description	Part No.
	C8612,C8619		CKSQYF105Z16
	C8616,C8621		CKSRYB103K50
	C8625		CKSRYB222K50
	C8623,C8624		CKSRYB473K50
	C8601,C8608		CKSRYF103Z50

## RESISTORS

R8633,R8634	RD1/2MMF100J
R8625,R8632	RD1/2MMF152J
R8624,R8631	RD1/4MUF100J
Other Resistors	RS1/16S□□□J

## OTHERS

8551	REMOTE RECEIVER SCREW	GP1UM26RK
		PMZ30P080FMC

## [FAN DRIVE BLOCK]

### SEMICONDUCTORS

IC8703	74VHCT00AMTC
IC8702	M5223AFP
IC8701	PQ20WZ11
Q8702	2SC2712
Q8701	HN1A01FU

### CAPACITORS

C8703	CEAT100M50
C8704,C8707,C8711	CEAT101M16
C8708,C8709,C8712	CEAT470M35
C8706,C8710	CKSRYF104Z16
C8705	CKSRYF105Z10

### RESISTORS

R8715-R8717,R8720	RS1/16S1001F
R8703	RS1/16S3001F
R8707	RS1/16S5101F
R8712	RS1/16S8200F
R8710	RS3LMF2R7J
Other Resistors	RS1/16S□□□J

## OTHERS

CN8704,CN8705	CONNECTOR 3P	B3B-ZR-3.4
CN8703	PH CONNECTOR	B6B-PH-SM3

## CONTROL ASSY

### SEMICONDUCTORS

IC8001	DS14C232CM
IC8002	TC74HC00AF
Q8002	2SC2712
Q8001	HN1A01FU
Q8003	RN1901
D8009,D8010	1SS355
D8001-D8008	UDZ15B

### COIL

L8001	LCTA221J3225
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### CAPACITORS

C8001,C8002,C8005,C8006	CEAT1R0M50
C8003,C8010	CEAT470M16
C8004,C8007,C8008	CKSRYB103K50
C8009	CKSRYB472K50

Mark	No.	Description	Part No.
<b>RESISTORS</b>			
	R8006		RAB4C102J
	Other Resistors		RS1/16S□□□J

## OTHERS

CN8001,CN8002	MINI JACK	AKN1070
CN8003	9P D-SUB SOCKET	AKP1213
CN8004,CN8005		AKP1215
	6P MINI DIN SOCKET	
CN8007	PH CONNECTOR	B6B-PH-SM3

## SP OUT L ASSY

### SEMICONDUCTORS

IC8151	LM50CIM3
IC8152	M5223AFP
Q8151	HN1A01FU

### COILS

L8151,L8152	CHOKE COIL	ATH1073
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### CAPACITORS

C8154	CCSRSL221J50
C8162	CEAT470M16
C8159	CKSRYB103K50
C8151,C8153	CKSRYB332K50
C8155	CKSRYB472K50
C8157,C8161	CKSRYF104Z16
C8158,C8160	CKSRYF105Z10
C8152	CKSRYF473Z50

### RESISTORS

R8153,R8154	RD1/2MMF100J
R8164	RS1/16S1001F
R8160	RS1/16S1800F
R8165	RS1/16S3001F
R8159	RS1/16S5101F
Other Resistors	RS1/16S□□□J

## OTHERS

CN8151	2P SPEAKER TERMINAL	AKE1041
CN8152	PH CONNECTOR	B6B-PH-SM3

## SP OUT R ASSY

### COILS

L8176,L8177	CHOKE COIL	ATH1073
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### CAPACITORS

C8179	CCSRSL221J50
C8176,C8178	CKSRYB332K50
C8180	CKSRYB472K50
C8177	CKSRYF473Z50

### RESISTORS

R8178,R8179	RD1/2MMF100J
Other Resistors	RS1/16S□□□J

## OTHERS

CN8176	2P SPEAKER TERMINAL	AKE1041
CN8177	PH CONNECTOR	B3B-PH-SM3



Mark	No.	Description	Part No.
<b>SIDE KEY ASSY</b>			
<b>SWITCHES</b>			
	S8251-S8261		ASG1088
<b>OTHERS</b>			
	CN8251	8P FFC CONNECTOR	AKM1207

**KEY CONNECTOR ASSY****SEMICONDUCTORS**

IC8301	PD5719A
Q8301	2SC2712
D8301,D8303	1SS355
D8302	RD3.0MB

**CAPACITORS**

C8303	CEAT2R2M50
C8304	CKSRYB103K50
C8301,C8302,C8305	CKSRYB472K50

**RESISTORS**

All Resistors	RS1/16S□□□□J
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**OTHERS**

CN8302	8P FFC CONNECTOR	AKM1207
X8301	CERALOCK (3.84MHz)	ASS1162
CN8301	PH CONNECTOR	B4B-PH-SM3

**THERMAL SENSOR ASSY****SEMICONDUCTORS**

IC8351	LM50CIM3
IC8352	M5223AFP

**CAPACITORS**

C8356	CEV470M6R3
C8354	CKSRYB103K50
C8351,C8355	CKSRYF104Z16
C8352,C8353	CKSRYF105Z10

**RESISTORS**

R8354,R8358	RS1/16S1001F
Other Resistors	RS1/16S□□□□J

**MX LED ASSY****SEMICONDUCTORS**

D8501	AEL1170
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**OTHERS**

CN8501	PH CONNECTOR	S3B-PH-SM3
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Mark	No.	Description	Part No.
<b>IR ASSY</b>			
<b>SEMICONDUCTORS</b>			
	Q8551		2SC2712
	D8552		1SS226
	D8551		1SS355

**CAPACITORS**

C8551	CEV470M6R3
C8553	CKSQYB472K50
C8552	CKSRYB103K50
C8554	CKSRYF104Z16

**RESISTORS**

All Resistors	RS1/16S□□□□J
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**V MID CLAMP ASSY****SEMICONDUCTORS**

Q9003,Q9004	2SA1162
Q9005,Q9006	2SB950A
Q9001,Q9002	2SC2712
D9001-D9008	1SS355
D9009,D9010	D1FL20U(S)
D9011,D9012	UDZ27B

**CAPACITORS**

C9001,C9002,C9005,C9006 (0.01μF/100V)	ACG1101
C9003,C9004	CKSRYF104Z16

**RESISTORS**

R9006	RS1/16S1002D
R9007-R9010	RS1/16S2202D
R9005	RS1/16S6801D
R9011-R9014	RT10PZ680K
Other Resistors	RS1/16S□□□□J

**OTHERS**

9001	HEAT SINK L	ANH1602
CN9001,CN9002	PH CONNECTOR	B5B-PH-SM3
	SCREW	BBZ30P080FMC

**VIDEO SLOT ST1 ASSY****[VIDEO I/O BLOCK]****SEMICONDUCTORS**

IC7002	NJM2234M
IC7003	TC4052BF
IC7001	TK15420M
IC7004	UPC4570G2
Q7001,Q7002,Q7006,Q7007	2SC2412K
Q7004,Q7005	HN1C01FU
D7001-D7004,D7007-D7010	1SS226
D7005,D7006	1SS355

# PDP-503CMX, PDP-503MXE, PDA-5002

Mark	No.	Description	Part No.
<b>CAPACITORS</b>			
	C7002,C7006		CEANP470M25
	C7003,C7012,C7015		CEAT100M50
	C7004,C7007,C7010,C7011,C7014		CEAT220M50
	C7013,C7016		CEAT4R7M50
	C7017,C7020		CKSQYB105K10
	C7009		CKSRYB103K50
	C7022,C7023,C7025,C7026		CKSRYB222K50
	C7001,C7005,C7008,C7018,C7019		CKSRYF104Z16
	C7021,C7024		CKSRYF104Z16

<b>RESISTORS</b>			
	All Resistors		RS1/16S□□□J

<b>OTHERS</b>			
	CN7002 4P DIN SOCKET		AKP1217
	CN7001 BNC SOCKET		AKX1051
	JA7003,JA7004 2P PIN JACK		DKB1031
	7005,7006 SCREW TERMINAL		VNE1949

## [YC SEPA BLOCK] SEMICONDUCTORS

IC7104	24LC01B
IC7103	CXA1875AM
IC7102	CXD2064Q
IC7101,IC7105	ML6428CS-1
Q7108,Q7109	2SA1037K
Q7101,Q7106	2SC2412K
Q7107	HN1A01FU
Q7102-Q7104	HN1B04FU
D7102,D7103	1SS355

<b>COILS</b>			
	L7102,L7103		LCYA270J2520
	L7101		LCYA470J2520

<b>CAPACITORS</b>			
	C7114		CCSRCH102J50
	C7107		CCSRCH220J50
	C7108		CCSRCH470J50
	C7102		CCSRCH560J50
	C7101,C7103,C7104,C7116		CEAT220M50
	C7110,C7133		CEAT221M16
	C7105,C7130		CKSQYB105K10
	C7109,C7131		CKSRYB104K16
	C7113		CKSRYB223K50
	C7106,C7111,C7112,C7117,C7118		CKSRYF104Z16
	C7120-C7129,C7132		CKSRYF104Z16

<b>RESISTORS</b>			
	R7148,R7161		RAB4C470J
	R7164		RS1/16S3001F
	R7151,R7153		RS1/16S3300F
	R7165		RS1/16S3301F
	R7154		RS1/16S4700F
	R7152		RS1/16S5600F
	R7155		RS1/16S7501F
	Other Resistors		RS1/16S□□□J

<b>OTHERS</b>			
	K7101,K7102 TEST PIN		AKX9002

Mark	No.	Description	Part No.
<b>[3D Y/C BLOCK]</b>			
<b>SEMICONDUCTORS</b>			
	IC7203		IS41C16256-35K
	IC7201		ML6428CS-1
	IC7202		UPD64082GF-3BA
	Q7201-Q7203,Q7206,Q7209,Q7211		2SA1037K
	Q7208		2SC2412K
	Q7205		DTC124EK
	Q7207		HN1B04FU

<b>COILS</b>			
	L7207,L7209 FERRITE BEAD		ATX1008
	L7205		LCTA4R7J2520
	L7201		LCYA120J2520
	L7202		LCYA220J2520

<b>CAPACITORS</b>			
	C7202		CCSRCH100D50
	C7201,C7205		CCSRCH150J50
	C7204,C7246,C7247		CCSRCH180J50
	C7224		CCSRCH391J50
	C7210		CCSRCH470J50
	C7236		CCSRCH471J50
	C7208		CCSRCH560J50
	C7245		CEAT100M50
	C7249		CEAT101M25
	C7227,C7237		CEAT220M50
	C7226,C7235		CKSQYB105K10
	C7223,C7225		CKSRYB103K50
	C7220,C7254		CKSRYB104K16
	C7214,C7215,C7219,C7221,C7222		CKSRYF104Z16
	C7228-C7234,C7238,C7239		CKSRYF104Z16
	C7241,C7242,C7250,C7251		CKSRYF104Z16

<b>RESISTORS</b>			
	All Resistors		RS1/16S□□□J

<b>OTHERS</b>			
	K7201,K7202 TEST PIN		AKX9002
	X7201 CRYSTAL RESONATOR (20MHz)		ASS1143

## [CHROMA DEC BLOCK] SEMICONDUCTORS

IC7301	BA7655AF
IC7302	TB1274AF
IC7303	TC7WH04FU
Q7301,Q7302	2SA1037K
Q7303-Q7306	2SC2412K
Q7307	HN1C01FU
D7301	1SS355

<b>CAPACITORS</b>			
	C7305		CCSRCH100D50
	C7340		CCSRCH390J50
	C7302,C7316,C7337		CEAT100M50
	C7341		CEAT220M50
	C7333		CEAT2R2M50

Mark	No.	Description	Part No.
	C7323		CEAT4R7M50
	C7304		CEATR47M50
	C7318,C7320,C7327,C7331,C7338		CKSQYB105K10
	C7303		CKSRYB103K50
	C7319,C7321,C7328,C7332,C7336		CKSRYB104K16
	C7334		CKSRYB223K50
	C7301,C7306-C7315,C7317,C7322		CKSRYF104Z16
	C7324-C7326,C7329,C7330,C7335		CKSRYF104Z16

#### RESISTORS

All Resistors RS1/16S□□□J

#### OTHERS

K7301-K7304 TEST PIN AKX9002  
X7301 CRYSTAL RESONATOR ASS1152  
(16.2MHz)

#### [DVI BLOCK]

#### SEMICONDUCTORS

IC7409	24LCS21A
IC7402-IC7408	TC74LCX541FT
IC7410	TC7WH04FU
IC7401	TFP201A
D7401	1SS184
D7402,D7404	1SS226
D7403	RD6.8MB

#### CAPACITORS

C7406,C7408,C7410,C7413,C7414	CCSRCH101J50
C7417,C7420,C7421,C7425-C7428	CCSRCH101J50
C7432,C7434	CCSRCH101J50
C7403	CEAT470M10
C7401,C7402,C7404,C7405,C7407	CKSRYF104Z16
C7409,C7411,C7412,C7415,C7416	CKSRYF104Z16
C7418,C7419,C7422-C7424	CKSRYF104Z16
C7429-C7431,C7433,C7435-C7438	CKSRYF104Z16

#### RESISTORS

R7412	RAB4C220J
R7401,R7402,R7408,R7409	RAB4C680J
R7413-R7416,R7423,R7429,R7432	RAB4C680J
R7438	RAB4C680J
R7417,R7418	RN1/16SE1001D

Other Resistors RS1/16S□□□J

#### OTHERS

CN7402 24P DVI SOCKET AKP1216

#### [VIDEO REG BLOCK]

#### SEMICONDUCTORS

IC7501	PQ05DZ11
IC7503,IC7504	PQ3DZ13
IC7502	TA79L05F

#### FILTERS

F7501-F7515 EMI FILTER ATF1194

Mark	No.	Description	Part No.
<b>CAPACITORS</b>			
	C7504,C7539		CEAT101M6R3
	C7501,C7511		CEAT221M16
	C7506,C7508,C7510,C7514,C7516		CEAT470M25
	C7520,C7524,C7526,C7528,C7530		CEAT470M25
	C7532,C7534,C7536,C7541,C7543		CEAT470M25
	C7545		CEAT470M25
	C7502,C7503,C7505,C7507,C7509		CKSRYF104Z16
	C7512,C7513,C7515,C7517,C7519		CKSRYF104Z16
	C7522,C7523,C7525,C7527,C7529		CKSRYF104Z16
	C7531,C7533,C7535,C7537,C7538		CKSRYF104Z16
	C7540,C7542,C7544		CKSRYF104Z16

#### RESISTORS

R7502,R7516	RS1MMF1R0J
R7519	RS1MMF4R7J

#### OTHERS

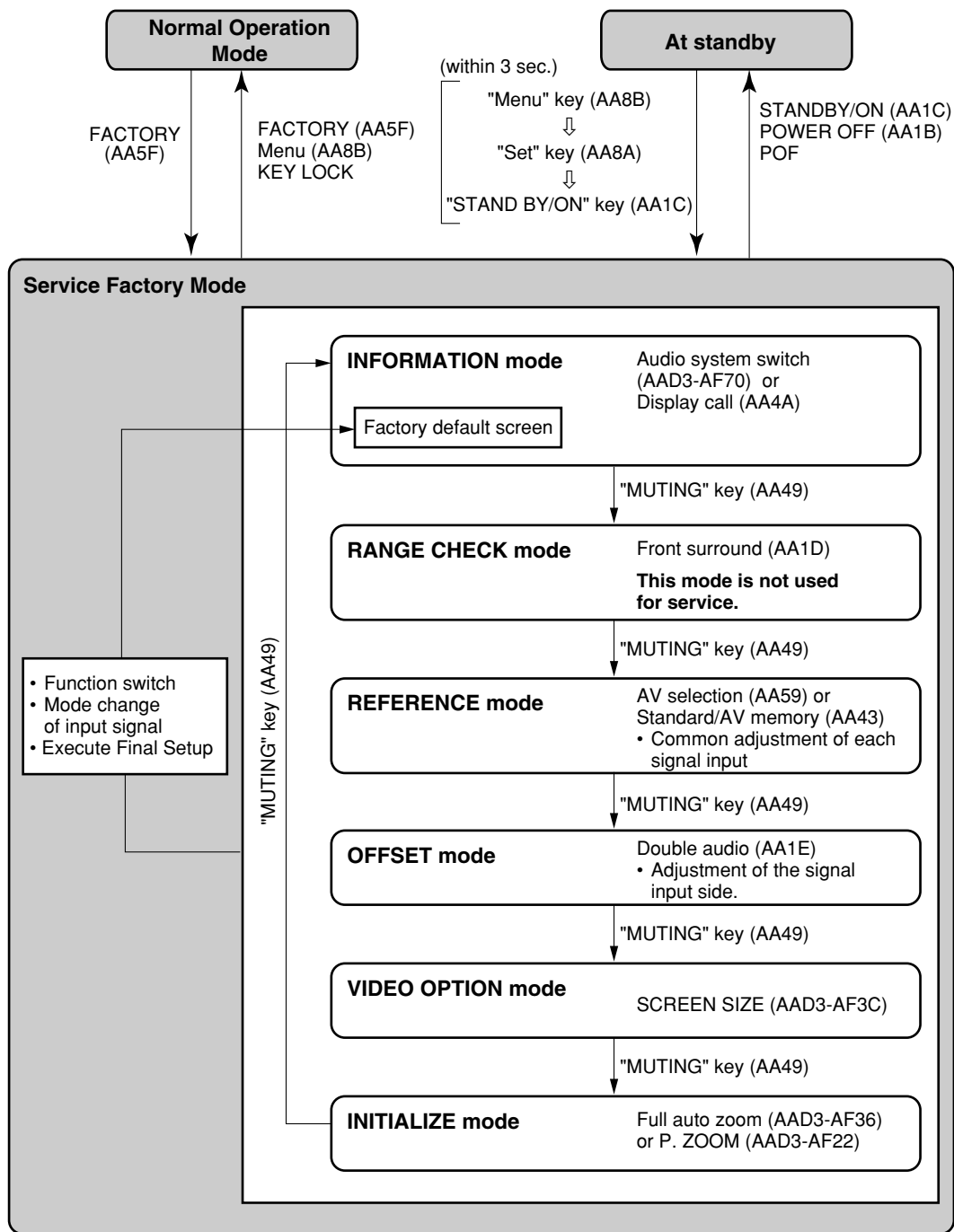
3004	SCREW	ABA1295
	NYRON RIVET	AEP-211
	PROTECTION SHEET	AMR3282
	HEXAGONAL HEAD SCREW	BBA1051
	SCREW	BPZ30P080FZK

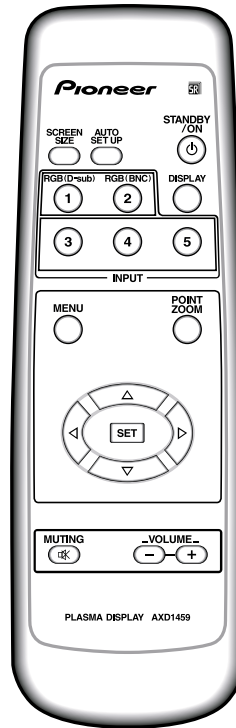
## 6. ADJUSTMENT

### 6.1 SERVICE FACTORY MODE

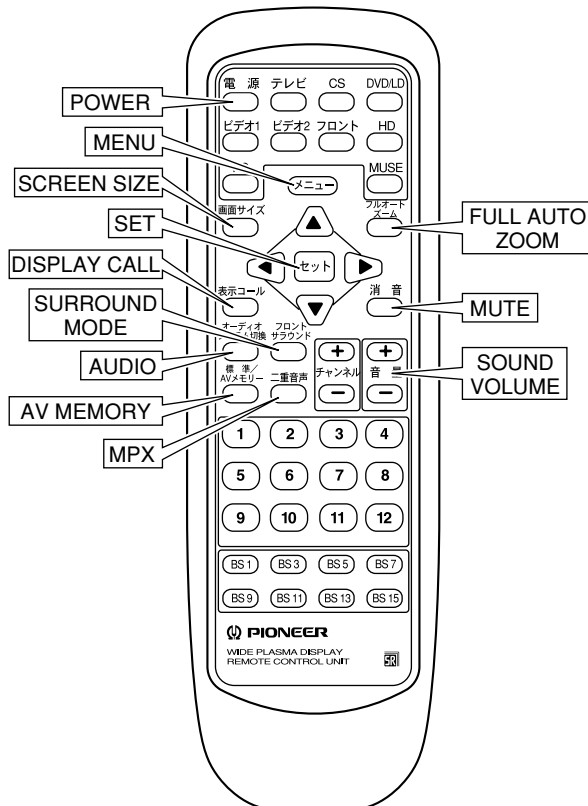
Perform the operations of Service Factory mode using the Remote Control Unit provided with the Plasma Display (AXD1459).

#### 6.1.1 State Transition Diagram

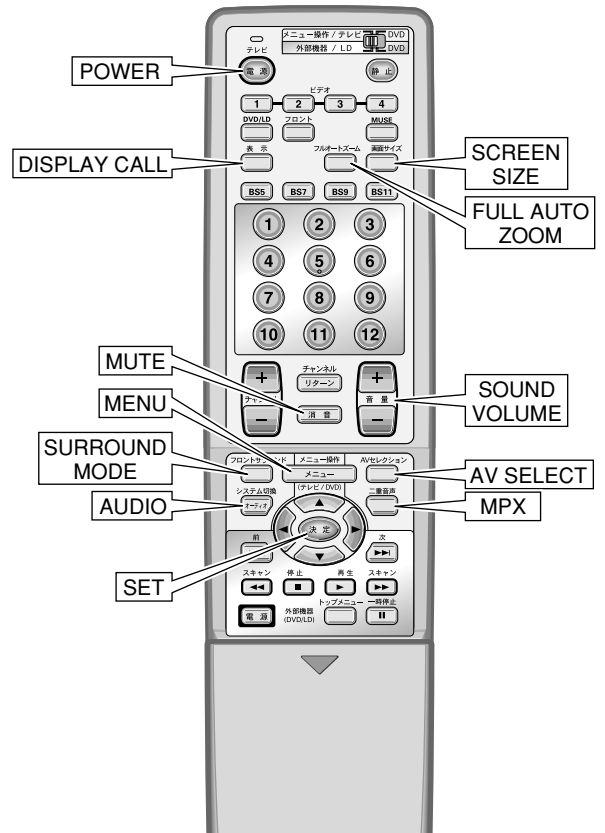




• AXD1459  
(PDP-503CMX)



• AXD1432  
(PDP-501HD)



• AXD1673  
(PDP-502HD)

## ■ Caution of Operation of the Remote Control Unit

- In the service factory mode, use the key which does not exist in a remote control unit (AXD1459) attached to this product as the direct selection key of item when selects each item. These keys can use with the attached remote control units (AXD1432 and AXD1673) in the PDP-501HD and PDP-502HD.
- When operate the service factory mode with the attached remote control unit in this product, selection is possible with the following key cyclically.
  - Large item selection: MUTE key
  - Selection except large item: UP (▲), DOWN (▼) keys

## ■ Operation When Entered the Service Factory Mode

### ① Setting value of menu mode

- Reset "PICTURE" item (center value).
  - Notes : Adjustment value of "PICTURE" to reset is limited to the following face.
    - At VIDEO: Current signal mode of the selected input function
    - At PC: Correspond to the history of the signal mode input into past, "Table A to H".
- Reset all "SCREEN" items (center value).
  - Note: Adjustment value of "SCREEN" to reset is limited to the current signal mode of the selected input function.
  - Supplement: If execute FINAL SET UP or PICTURE DEFAULT, minimize the adjustment value of menu mode here so that it becomes the center value.
- "SET UP" and "OPTION" of menu mode are maintained except items as follows.
  - COLOR TEMP: It becomes "MIDDLE" setting
  - AUTO POWER OFF/POWER MANAGEMENT: Setting is maintained, but do not work

### ② Adjustment value of the integrator mode

- Adjustment values of "PICTURE" and "WHITE BAL" select the adjustment values which are applicable to the current input function signal mode.
  - Notes : Adjustment value of "PICTURE" and "WHITE BAL" to reset is limited to the following face.
    - At VIDEO: Current signal mode of the selected input function
    - At PC: Correspond to the history of the signal mode input into past, "Table A to H".
- SCREEN setting value is maintained.
- "SET UP" and "OPTION" of integrator menu are maintained except items as follows.
  - SIDE MASK LEVEL: Adjustment value is reset, and it becomes default value.
  - FULL MASK which was set with the integrator mode: Release
  - OFF TIMER: Release
- COLOR MODE (integrator menu) setting maintains setting in the integrator menu.

### ③ Others

- When input signal mode changed, change setting, and display default screen (INFORMATION-VERSION) of the service factory mode. Maintain the service factory mode.
  - Note: At a point in time when the input signal mode changed, perform an operation of ① and ②.
- Switch it in selected FUNCTION when switched FUNCTION. Then display default screen (INFORMATION-VERSION) of the service factory mode, and maintain the service factory mode.
  - Note: At the point that switched FUNCTION, perform an operation of ① and ②.
- Perform COLOR DETECT setting with "COLOR SYSTEM" of set menu mode.
- Only address 0100-01FF of module microcomputer / EEPROM copy/updates the data to the module microcomputer area of main microcomputer EEPROM.
- Various protection feature of the panel (Still picture detection, Block brightness detection and SCAN IC protection feature) turns OFF.
  - Notes: When each protection feature turns OFF once and released the factory mode, maintain it. Protection feature turns ON by turning ON from POWER OFF. Therefore turn ON from POWER OFF by all means in order to operate protection feature when released the factory mode.
- In the no input, apply playback and non-correspondence PC signal input, accepts only the setting item that does not depend on a signal mode. (But refer to the item "MASK1 and MASK2" about MASK setting.)
  - An item depending on the signal mode turns the display color to gray and it cannot change the setting.

## 6.1.2 Adjustment Items Table of Service Factory

## SLOT

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range (OFFSET Reference Value)
CD	YDL	Y-DELAY	YDL	REF/OFS-SLOT-1	0 to 15 [8]
	YOUTLEV	Y-OUT LEVEL	YOL	REF/OFS-SLOT-2	0 to 63 [32]
	TINT	CD TINT	CTI	REF/OFS-SLOT-3	0 to 63 [32]
	CrOFFSET	CDR OFFSET	CDR	REF/OFS-SLOT-4	0 to 15 [8]
	CbOFFSET	CDB OFFSET	CDB	REF/OFS-SLOT-5	0 to 15 [8]
EXP	R-Y_LEVEL	R-Y LEVEL	LRY	REF/OFS-SLOT-6	0 to 255 [128]
	B-Y_LEVEL	B-Y LEVEL	LBY	REF/OFS-SLOT-7	0 to 255 [128]

## RGB1

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range (OFFSET Reference Value)
MATRIX	PICTURE	MAT CONT	MCT	REF/OFS-RGB1-1	0 to 63 [32]
	BRIGHT	MAT BRIGHT	MBR	REF/OFS-RGB1-2	0 to 63 [32]
	COLOR	MAT COLOR	MCL	REF/OFS-RGB1-3	0 to 63 [32]
	HUE	MAT TINT	MTI	REF/OFS-RGB1-4	0 to 63 [32]
AD	MAINCONTRAST	AD MAIN CONT	MCA	REF/OFS-RGB1-5	0 to 255 [128]
	SUBRCONTRAST	AD R HIGH	GHA	REF/OFS-RGB1-6	0 to 255 [128]
	SUBGCONTRAST	AD G HIGH	BHA	REF/OFS-RGB1-7	0 to 255 [128]
	SUBBCONTRAST	AD B HIGH	RHA	REF/OFS-RGB1-8	0 to 255 [128]
	BRIGHTR	AD R LOW	GLA	REF/OFS-RGB1-9	0 to 255 [128]
	BRIGHTG	AD G LOW	BLA	REF/OFS-RGB1-10	0 to 255 [128]
	BRIGHTB	AD B LOW	RLA	REF/OFS-RGB1-11	0 to 255 [128]

## RGB2

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range (OFFSET Reference Value)
IC102 W/B	COLOR	COLOR	COL	REF/OFS-RGB2-1	0 to 255 [128]
	TINT	TINT	TNT	REF/OFS-RGB2-2	0 to 255 [128]
IC30 W/B	MCONTRAST	CONTRAST	CNT	REF/OFS-RGB2-3	0 to 255 [128]
	MBRIGHT	BRIGHT	BRT	REF/OFS-RGB2-4	0 to 255 [128]
	R HIGH	R. HIGH	RHI	REF/OFS-RGB2-5	0 to 255 [255]
	G HIGH	G. HIGH	GHI	REF/OFS-RGB2-6	0 to 255 [255]
	B HIGH	B. HIGH	BHI	REF/OFS-RGB2-7	0 to 255 [255]
	R LOW	R. LOW	RLW	REF/OFS-RGB2-8	0 to 255 [128]
	G LOW	G. LOW	GLW	REF/OFS-RGB2-9	0 to 255 [128]
	B LOW	B. LOW	BLW	REF/OFS-RGB2-10	0 to 255 [128]

## DIGITAL

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range (OFFSET Reference Value)
DIGITAL	PANEL R-HIGH	PANEL R-HIGH	PRH	REF/OFS-DIGITAL-1	0 to 255 [255]
	PANEL G-HIGH	PANEL G-HIGH	PGH	REF/OFS-DIGITAL-2	0 to 255 [255]
	PANEL B-HIGH	PANEL B-HIGH	PBH	REF/OFS-DIGITAL-3	0 to 255 [255]
	PANEL R-LOW	PANEL R-LOW	PRL	REF/OFS-DIGITAL-4	0 to 999 [512]
	PANEL G-LOW	PANEL G-LOW	PGL	REF/OFS-DIGITAL-5	0 to 999 [512]
	PANEL B-LOW	PANEL B-LOW	PBL	REF/OFS-DIGITAL-6	0 to 999 [512]
	ABL LEVEL	ABL LEVEL	ABL	REF/OFS-DIGITAL-7	0 to 255 [128]
	X-SUS-B	X-SUS-B	XSB	REF-DIGITAL-8	4 to 12
	X-SUS-G	X-SUS-G	XSG	REF-DIGITAL-9	4 to 12
	Y-SUS-B	Y-SUS-B	YSB	REF-DIGITAL-10	4 to 12
	Y-SUS-G	Y-SUS-G	YSG	REF-DIGITAL-11	4 to 12
	V-SUS	V-SUS	VSU	REF-DIGITAL-12	0 to 255
	V-OFFSET	V-OFFSET	VOF	REF-DIGITAL-13	0 to 255

## SIDE MASK LEVEL (VIDEO OPTION)

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range (OFFSET Reference Value)
IC30	R SIDE MASK LEV	R SIDE MASK LEV	RSL	VOP-M LEV-1	0 to 255
	G SIDE MASK LEV	G SIDE MASK LEV	GSL	VOP-M LEV-2	0 to 255
	B SIDE MASK LEV	B SIDE MASK LEV	BSL	VOP-M LEV-3	0 to 255

## COLOR TEMP (VIDEO OPTION)

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range (OFFSET Reference Value)
IC102	COLOR	COLOR		VOP-CT-3	0 to 255 [128]
	TINT	TINT		VOP-CT-4	0 to 255 [128]
IC30	MCONTRAST	CONTRAST		VOP-CT-1	0 to 255 [128]
	MBRIGHT	BRIGHT		VOP-CT-2	0 to 255 [128]
	R HIGH	R. HIGH		VOP-CT-5	0 to 255 [255]
	G HIGH	G. HIGH		VOP-CT-6	0 to 255 [255]
	B HIGH	B. HIGH		VOP-CT-7	0 to 255 [255]
	R LOW	R. LOW		VOP-CT-8	0 to 255 [128]
	G LOW	G. LOW		VOP-CT-9	0 to 255 [128]
	B LOW	B. LOW		VOP-CT-10	0 to 255 [128]

## COLOR MODE2 (VIDEO OPTION)

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range (OFFSET Reference Value)
IC102	COLOR	COLOR		VOP-CM2-3	0 to 255 [128]
	TINT	TINT		VOP-CM2-4	0 to 255 [128]
IC30	MCONTRAST	CONTRAST		VOP-CM2-1	0 to 255 [128]
	MBRIGHT	BRIGHT		VOP-CM2-2	0 to 255 [128]
	R HIGH	R. HIGH		VOP-CM2-5	0 to 255 [255]
	G HIGH	G. HIGH		VOP-CM2-6	0 to 255 [255]
	B HIGH	B. HIGH		VOP-CM2-7	0 to 255 [255]
	R LOW	R. LOW		VOP-CM2-8	0 to 255 [128]
	G LOW	G. LOW		VOP-CM2-9	0 to 255 [128]
	B LOW	B. LOW		VOP-CM2-10	0 to 255 [128]

## ■ Calculation of Adjustment Value in the Service Factory Mode

- As for the adjustment value in the service factory mode, it becomes an actual adjustment value that subtracted OFFSET reference value (value in [ ] of the above table) from the value that added a REFERENCE adjustment value and an OFFSET adjustment value.  
Notes: It becomes the adjustment value the value that adjusted it with REFERENCE because there is not an OFFSET adjustment value as for R SIDE MASK LEV, G SIDE MASK LEV and B SIDE MASK LEV of item SIDE MASK LEVEL and X-SUS-B, X-SUS-G, Y-SUS-B, Y-SUS-G, V-SUS and V-OFFSET of item DIGITAL.
- As for COLOR MODE2 and COLOR TEMP, it becomes OFFSET value of each the value that subtracted OFFSET reference value (a value in [ ] of the above table) from a adjustment value of selected mode. It becomes a adjustment value of the last RGB 2 device (IC30 and IC102) the value that added this OFFSET value to each adjustment item of RGB 2.

## ■ Actual Calculation Example

- Each adjustment value of SLOT/ RGB 1/RGB2/DIGITAL  
(REFERENCE value)  
+  
{ (OFFSET value) – [OFFSET reference value] } ... Calculation of a value to add as OFFSET
- COLOR MODE2 OFFSET value  
{ (COLOR MODE2 adjustment value) - [OFFSET reference value] } ... Calculation of a value to add as OFFSET for COLOR MODE2  
Note: Add it only in COLOR MODE2 selection.
- COLOR TEMP OFFSET value  
{ (COLOR TEMP adjustment value) - [OFFSET reference value] } ... Calculation of a value to add as OFFSET for COLOR TEMP  
Note: Add it only in COLOR TEMP 1,2,4 and 5 selection.

Perform the addition in the normal operation, menu mode and COLOR TEMP adjustment mode of the service factory mode (in item VIDEO OPTION), and add OFFSET value of selected setting.

COLOR TEMP OFFSET does not add it in order to work by COLOR TEMP 3 setting in the integrator mode and in the service factory mode except COLOR TEMP adjustment mode.



## 6.1.4 Display Description of Service Factory Menu

### 1. In Adjustment Item

1	5	10	15	20	25	30	35	40
1		OFS-SLOT		#1-S1-IN4-04-2*NT				
5								
10								
15		Y-DELAY						
16								

Display color : White

Half-tone : Blue (second row/15th row for each 5 to 36 columns)

When there is not item which is applicable to the input signal mode, display the adjustment value with "\_\_\_\_\_" (\_\_\_\_\_), and perform the item indication color to gray.

- Second row / 6th to 16th columns : Display the upper layer of selection item ••• At the Service factory mode
- Second row / 6th to 7th columns : Display the ID No. ••• At the RS-232C factory mode
- Second row / 9th to 16th columns : Display the upper layer of selection item ••• At the RS-232C factory mode
- Second row / 19th to 20th columns : Current color mode setting
- Second row / 22th to 23th columns : Current slot type

Slot Type or Model Type	At PDA-5002 is mounted with	PDP-503PRO and PRO-1000HD	Outside Product Slot	No SLOT
Display	S1	US	T1 to T8	NO

- Second row / 25th to 27th columns : Current function
  - Second row / 29th to 32th columns : Current signal mode
  - Second row / 32th columns : Current Screen size (Refer to the "classification of input signal" with regard to each numeric value.)
- Current signal mode displays the signal mode of any of mode 03, mode 31, mode E1, mode 61 or mode 71.

Setting	Signal Mode Display
VIDEO	03
VGA	31
WVGA	E1
XGA	61
WXGA	71

Current signal mode displays the signal mode of any of mode 12 or mode 13.

HDTV Mode Setting (Integrator Menu)	Signal Mode Display
1080i	12
1035i	13

Display in the no signal and non-correspondence signal

Signal Mode Display	Signal Definition
FB	OUT OF RANGE (The signal that the measurement is impossible with the main microcomputer)
FC	OUT OF RANGE (In the video system signal when video signal does not input)
FD	OUT OF RANGE (In the non-correspondence signal at DVI input)
FE	OUT OF RANGE (When the measurement is possible with the main microcomputer, and non-correspondence signal that is not applicable to FC and FD)
FF	No signal

- Second row / 33th column : Current input form

Input Form	Component	Video-RGB	Composite	Y/C
Display	#	@	*	/

Non-display excepting above form (blank).

- Second row / 34th to 35th columns : Current color system

Color System	NTSC	PAL	SECAM	4.43NTSC	PAL-M	PAL-N	BLACK/WHITE
Display	NT	PL	SC	4N	PM	PN	BW

Non-display it (blank) when a case except COLOR SYSTEM mentioned above and COLOR SYSTEM setting is fixed.

- 15th row / 6th to 24th columns : Current item selection

- 15th row / 26th to 35th columns :

**RANGE CHECK selection : Current selecting value**

- At REFERENCE selection : Adjustment value
  - At OFFSET selection : OFFSET value ( adjustment value) \* Adjustment value is REFERENCE value + OFFSET value.
  - At VIDEO OPTION selection : No display
- At INITIALIZE selection : The setting that is selected. (There is no display in the item which there is the lower layer.)

## 2. INFORMATION

1	5	10	15	20	25	30	35	40
1		I N F O				# 1 - S 1 - I N 4 - 0 2 - 2 * N T		
5		V E R S I O N						
		M A I N	U C O M	:	*	*	*	
		W I D E	U C O M	:	*	*	*	
		W I D E	F R O M	:	*	*	*	
10		M O D U	U C O M	:	*	*	*	
		P A N E	U C O M	:	*	*	*	
		P A N E	F R O M	:	*	*	*	
15								
16								

### • Basic Operation

- Display the state of each item

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	VERSION	Display the each information	Main, Wide, module and panel microcomputer : Ver	×
AA02	2	PD INFO		Wide flash (OSD) / Panel flash (Sequence) : Ver	×
AA03	3	NG INFO		Past eight times / Place (1st, 2nd) / Time Stamp	×
AA04	4	TEMPERATURE		AUDIO/FAN/MODULE/PANEL/WIDE/MAIN IIC/MODULE IIC/DEW	×
AA05	5	MEMO		1/2/3/FAN output	×
AA06	6			Display MEMO	×
AA07	7				
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	»				
AA95	«				
AA8A	SET				
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	RANGE CHECK		

### • Operating specification

- Start from VERSION (Key1) when shifted to this setting screen.
  - When each key was pressed, follow the required operation.
- Note : Perform VERSION display as the default screen of the service factory mode.

### 3. OSD Display in INFORMATION

#### ① VERSION

1	1	5	10	15	20	25	30	35	40
1			I	N	F	O			
5									
10									
15									
16									

#### ② PD INFO.

1	1	5	10	15	20	25	30	35	40
1			I	N	F	O			
5									
10									
15									
16									

Display the power down point (1st or 1st, 2nd) and an hour meter of the time.

Perform display to maximum eight times, and if display became more than eight times, perform clear in order from the old information, and update it to the latest information.

#### Display details at PD INFORMATION

	Display	PD Point		Display	PD Point
1	X-DRV	X-DRIVE	5	ADRES	ADDRESS junction
2	X-DDC	X-DC/DC CONVERTER	6	ADR-K	ADDRESS resonance
3	Y-DRV	Y-DRIVE	7	POWER	Power supply
4	Y-DDC	Y-DC/DC CONVERTER	8	DC-DC	DC/DC CONVERTER (DIGITAL)

#### ③ NG INFO.

1	1	5	10	15	20	25	30	35	40
1			I	N	F	O			
5									
10									
15									
16									

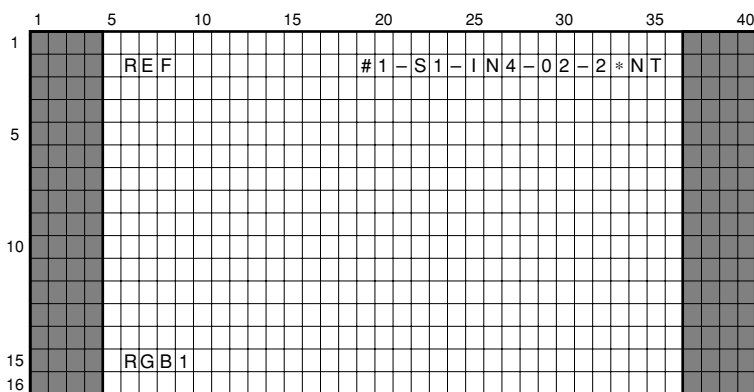
#### ④ TEMPERATURE

- Each display is the value of A/D input or D/A output of the microcomputer (0 to 255).
- Temperature sensor 1, 2 and 3
- FAN

⑤ MEMO

74

## 4. REFERENCE



Display color : White  
 Halftone : Blue (Second row / 15th row  
 for each 5th to 36th columns)

### ●Basic Operation

- Select the adjustment table.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	RGB1	Select the adjustment table		○
AA02	2	RGB2			○
AA03	3	DIGITAL			○
AA04	4	SLOT			○
AA05	5				
AA06	6				
AA07	7				
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select the upper item			
AA97	▼	Select the lower item			
AA94	»				
AA95	«				
AA8A	SET	Select the item and shift to lower layer			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment /setting screen	OFFSET		

### ●Operating specification

- Start from RGB 1 (Key 1) when shifted to this setting screen.  
 However, the movement original item to be selected when shifted from the lower layer.
- When each key was pressed, follow the required operation.
- In INPUT5 (DVI) selection, impossible "RGB1" and "SLOT" selections (do not perform the display skip).
- When SLOT is not inserted and the external SLOT is inserted, selection of "SLOT" is impossible (do not perform the display skip).
- When selection of the item is impossible, turn the OSD display color into gray.

# PDP-503CMX, PDP-503MXE, PDA-5002

## ① REFERENCE — RGB1

1	5	10	15	20	25	30	35	40
1								
5								
10								
15								
16								

Display color : White  
Half tone : Blue (second row / 15th row for each 5 to 36th columns)

## ●Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remark	Lower Layer
AA01	1	MAT CONT	Call the adjustment value and display it.		×
AA02	2	MAT BRIGHT			×
AA03	3	MAT COLOR			×
AA04	4	MAT TINT			×
AA05	5	AD MAIN CONT			×
AA06	6	AD R HIGH			×
AA07	7	AD G HIGH			×
AA08	8	AD B HIGH			×
AA09	9	AD R LOW			×
AA00	10	AD G LOW			×
AA46	11	AD B LOW			×
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	»	Adjustment value of the parameter selecting goes up.			
AA95	«	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	OFFSET		

## ●Operating specification

- Start from MAT CONT (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- When there is not the item which is applicable to an input signal mode, display the adjustment value to "———", and turn the item display color into gray.

## ② REFERENCE — RGB2

1	5	10	15	20	25	30	35	40
1		REF - RGB2		#1 - S1 - IN4 - 02 - 2 * NT				
5								
10								
15		CONTRAST		:	*	*	*	
16								

Display color : White  
Half tone : Blue (second row / 15th row for each 5 to 36th columns)

### ●Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	CONTRAST	Call the adjustment value and display it.		×
AA02	2	BRIGHT			×
AA03	3	COLOR			×
AA04	4	TINT			×
AA05	5	R HIGH			×
AA06	6	G HIGH			×
AA07	7	B HIGH			×
AA08	8	R LOW			×
AA09	9	G LOW			×
AA00	10	B LOW			×
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	»	Adjustment value of the parameter selecting goes up.			
AA95	«	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70	AUDIO	Shift to various adjustment / setting screen.	INFORMATION		
AA4A	DISPLAY CALL				
AA1D	SURROUND MODE		RANGE CHECK		
AA59	AV SELECT		REFERENCE		
AA43	AV MEMORY		OFFSET		
AA1E	MPX		VIDEO OPTION		
AAD3-AF3C	SCREEN SIZE		INITIALIZE		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM				
AA49	MUTING	Shift to next adjustment / setting screen.	OFFSET		

### ●Operating specification

- Start from CONTRAST (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- When there is not the item which is applicable to an input signal mode, display the adjustment value to "\_\_\_\_", and turn the item display color into gray.

# PDP-503CMX, PDP-503MXE, PDA-5002

## ③ REFERENCE — DIGITAL

1	5	10	15	20	25	30	35	40
1		REF-DIG		#1-S1-IN4-02-2*NT				
5								
10								
15		PANEL R-HIGH		:	*	*	*	
16								

Display color : White  
 Half tone : Blue (second row / 15th row for each 5 to 36th columns)

### ●Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	PANEL R-HIGH	Call the adjustment value and display it.		×
AA02	2	PANEL G-HIGH			×
AA03	3	PANEL B-HIGH			×
AA04	4	PANEL R-LOW			×
AA05	5	PANEL G-LOW			×
AA06	6	PANEL B-LOW			×
AA07	7	ABL LEVEL			×
AA08	8	X-SUS-B			×
AA09	9	X-SUS-G			×
AA00	10	Y-SUS-B			×
AA46	11	Y-SUS-G			×
AA47	12	V-SUS			×
AA4D	BS1	V-OFFSET			×
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	»	Adjustment value of the parameter selecting goes up.			
AA95	«	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	OFFSET		

### ●Operating specification

- Start from PANEL R-HIGH (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- When there is not the item which is applicable to an input signal mode, display the adjustment value to "\_\_\_\_\_", and turn the item display color into gray.



④ **REFERENCE — SLOT (At Connected SLOT ST1)** • This mode is effective for SLOT ST1 only in connection

	1	5	10	15	20	25	30	35	40
1									
			REF-SLOT			#1-S1-IN4-02-2*NT			
5									
10									
15									
16			Y-DELAY			:	*	*	*

Display color : White  
Half tone : Blue (second row / 15th row for each 5 to 36th columns)

- **Basic Operation**

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	Y-DELAY	Call the adjustment value and display it.		×
AA02	2	Y-OUT LEVEL			×
AA03	3	CD TINT			×
AA04	4	CDR OFFSET			×
AA05	5	CDB OFFSET			×
AA06	6	R-Y LEVEL			×
AA07	7	B-Y LEVEL			×
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	≫	Adjustment value of the parameter selecting goes up.			
AA95	≪	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	OFFSET		

- Operating specification

- Start from Y-DELAY (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- When there is not the item which is applicable to an input signal mode, display the adjustment value to "\_\_\_\_", and turn the item display color into gray.

## 5. OFFSET

1	5	10	15	20	25	30	35	40
1		OFS				#1-S1-IN4-02-2*NT		
5								
10								
15		RGB1						
16								

Display color : White  
Half tone : Blue (second row / 15th row for each 5 to 36th columns)

### •Basic Operation

Select the adjustment table

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	RGB1	Select the adjustment table		○
AA02	2	RGB2			○
AA03	3	DIGITAL			○
AA04	4	SLOT			○
AA05	5				
AA06	6				
AA07	7				
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select the upper item			
AA97	▼	Select the lower item			
AA94	»				
AA95	«				
AA8A	SET	Select the item and shift to lower layer			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	VIDEO OPTION		

### •Operating specification

- Start from RGB 1 (Key 1) when shifted to this setting screen. However, the movement original item to be selected when shifted from the lower layer.
- When each key was pressed, follow the required operation.
- In INPUT5 (DVI) selection, impossible "RGB1" and "SLOT" selections (do not perform the display skip).
- When SLOT is not inserted and the external SLOT is inserted, selection of "SLOT" is impossible (do not perform the display skip).
- When selection of the item is impossible, turn the OSD display color into gray.
- Selection of each item is impossible at no input signal.

### ① OFFSET — RGB1

	1	5	10	15	20	25	30	35	40
1			OFS - RGB 1		# 1 - S 1 - I N 4 - 0 2 - 2 * N T				
5									
10									
15			MAT	CONT			:	*	*
16							*	*	*

Display color : White  
Half tone : Blue (second row / 15th row for  
each 5 to 36th columns)

## ● Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	MAT CONT	Call the adjustment value and display it.		×
AA02	2	MAT BRIGHT			×
AA03	3	MAT COLOR			×
AA04	4	MAT TINT			×
AA05	5	AD MAIN CONT			×
AA06	6	AD R HIGH			×
AA07	7	AD G HIGH			×
AA08	8	AD B HIGH			×
AA09	9	AD R LOW			×
AA00	10	AD G LOW			×
AA46	11	AD B LOW			×
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	≫	Adjustment value of the parameter selecting goes up.			
AA95	≪	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	VIDEO OPTION		

- **Operating specification**

- Start from MAT CONT (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- When there is not the item which is applicable to an input signal mode, display the adjustment value to "—— (——)", and turn the item display color into gray.

## PDP-503CMX, PDP-503MXE, PDA-5002

## ② OFFSET — RGB2

	1	5	10	15	20	25	30	35	40
1			OFS-RGB2			#1-S1-IN4-02-2*NT			
5									
10									
15			CONTRAST				:***(***)		
16									

Display color : White  
Half tone : Blue (second row / 15th row for  
each 5 to 36th columns)

- **Basic Operation**

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	CONTRAST	Call the adjustment value and display it.		×
AA02	2	BRIGHT			×
AA03	3	COLOR			×
AA04	4	TINT			×
AA05	5	R HIGH			×
AA06	6	G HIGH			×
AA07	7	B HIGH			×
AA08	8	R LOW			×
AA09	9	G LOW			×
AA00	10	B LOW			×
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	≫	Adjustment value of the parameter selecting goes up.			
AA95	≪	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING		Shift to next adjustment / setting screen.	VIDEO OPTION	

- Operating specification

- Start from CONTRAST (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- When there is not the item which is applicable to an input signal mode, display the adjustment value to "—— (——)", and turn the item display color into gray.

## ③ OFFSET — DIGITAL

1	5	10	15	20	25	30	35	40
1		OFS-DIG		#1-S1-IN4-02-2*NT				
5								
10								
15		PANEL R-HIGH		:*** (*** )				
16								

Display color : White  
 Half tone : Blue (second row / 15th row for  
 each 5 to 36th columns)

## ●Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	PANEL R-HIGH	Call the adjustment value and display it.		×
AA02	2	PANEL G-HIGH			×
AA03	3	PANEL B-HIGH			×
AA04	4	PANEL R-LOW			×
AA05	5	PANEL G-LOW			×
AA06	6	PANEL B-LOW			×
AA07	7	ABL LEVEL			×
AA08	8	X-SUS-B	-	Selection is possible, and setting is impossible	×
AA09	9	X-SUS-G			×
AA00	10	Y-SUS-B			×
AA46	11	Y-SUS-G			×
AA47	12	V-SUS			×
AA4D	BS1	V-OFFSET			×
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	»	Adjustment value of the parameter selecting goes up.			
AA95	«	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70	AUDIO	Shift to various adjustment / setting screen.	INFORMATION		
AA4A	DISPLAY CALL				
AA1D	SURROUND MODE		RANGE CHECK		
AA59	AV SELECT		REFERENCE		
AA43	AV MEMORY		OFFSET		
AA1E	MPX		VIDEO OPTION		
AAD3-AF3C	SCREEN SIZE		INITIALIZE		
AAD3-AF36	FULL AUTO ZOOM	Shift to next adjustment / setting screen.			
AAD3-AF22	P.ZOOM				
AA49	MUTING		VIDEO OPTION		

## ●Operating specification

- Start from PANEL R-HIGH (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- When there is not the item which is applicable to an input signal mode, display the adjustment value to "—— (——)", and turn the item display color into gray.
- Because there is not the item which is applicable to an OFFSET item as for X-SUS-B, X-SUS-G, Y-SUS-B, Y-SUS-G, V-SUS and V-OFFSET, selection is impossible. Always turn the OSD display color into gray, and display the adjustment value to "—— (——)".

## PDP-503CMX, PDP-503MXE, PDA-5002

#### ④ OFFSET — SLOT (At Connected SLOT ST1)

- This mode is effective for SLOT ST1 only in connection

	1	5	10	15	20	25	30	35	40
1			OFS-SLOT		#1-S1-IN4-02-2*NT				
5									
10									
15			Y-DELAY			:	*	*	*
16							(	*	*

Display color : White

Half tone : Blue (second row / 15th row for each 5 to 36th columns)

- **Basic Operation**

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	Y-DELAY	Call the adjustment value and display it.		×
AA02	2	Y-OUT LEVEL			×
AA03	3	CD TINT			×
AA04	4	CDR OFFSET			×
AA05	5	CDB OFFSET			×
AA06	6	R-Y LEVEL			×
AA07	7	B-Y LEVEL			×
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	≫	Adjustment value of the parameter selecting goes up.			
AA95	≪	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	VIDEO OPTION		

- Operating specification

- Start from Y-DELAY (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- When there is not the item which is applicable to an input signal mode, display the adjustment value to "—— (——)", and turn the item display color into gray.

## 6. VIDEO OPTION

1	5	10	15	20	25	30	35	40
1	V I D E O   O P T			# 1 - S 1 - I N 4 - 0 2 - 2 * N T				
5								
10								
15	S I D E   M A S K   L E V							
16								

Display color : White

Half tone : Blue (second row / 15th row for each 5 to 36th columns)

## ● Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	SIDE MASK LEV	Select the adjustment item	Shift to adjustment screen of SIDE MASK LEVEL at SET (AA8A).	○
AA02	2	C MODE2		Shift to adjustment screen of COLOR MODE2 at SET (AA8A).	○
AA03	3	C TEMP LOW		Shift to adjustment screen of COLOR TEMP LOW at SET (AA8A).	○
AA04	4	C TEMP MID LOW		Shift to adjustment screen of COLOR TEMP MID LOW at SET (AA8A).	○
AA05	5	C TEMP MID HIGH		Shift to adjustment screen of COLOR TEMP MID HIGH at SET (AA8A).	○
AA06	6	C TEMP HIGH		Shift to adjustment screen of COLOR TEMP HIGH at +SET (AA8A).	○
AA07	7				
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	»				
AA95	«				
AA8A	SET	Select the item and shift to adjustment screen.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	INITIALIZE		

# PDP-503CMX, PDP-503MXE, PDA-5002

## •Operating specification

- Start from SIDE MASK LEVEL (Key 1) when shifted to this setting screen.  
However, the movement original item to be selected when shifted from the lower layer.
- When each key was pressed, follow the required operation.
- When entered the service factory mode, COLOR MODE works by integrator setting.  
However in the COLOR MODE2 adjustment, Work with COLOR MODE2 without relation in COLOR MODE setting of the integrator menu.
- COLOR TEMP Setting in the COLOR TEMP Adjustment  
When entered the service factory mode without a relation in user setting, COLOR TEMP becomes "MIDDLE".  
In the COLOR TEMP adjustment, switch the operation to setting of selected COLOR TEMP.



# ① SIDE MASK LEV. Adjustment

1	5	10	15	20	25	30	35	40
1		VOP-S	MASK		#1-S1-I	N4-02-2	*N	T
5								
10								
15		R	SIDE	MASK	LEV	:	*	*
16								

Display color : White  
Half tone : Blue (second row / 15th row for each 5 to 36th columns)

## ●Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	R SIDE MASK LEV	Call the adjustment value and display it.		×
AA02	2	G SIDE MASK LEV			×
AA03	3	B SIDE MASK LEV			×
AA04	4				
AA05	5				
AA06	6				
AA07	7				
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	»	Adjustment value of the parameter selecting goes up.			
AA95	«	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	INITIALIZE		

## ●Operating specification

- Start from R SIDE MASK LEVEL (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.

## ② COLOR MODE2 Adjustment

1	5	10	15	20	25	30	35	40
1		VOP-C	MODE2	#1-S1-I	N4-02-2	*NT		
5								
10								
15		CONTRAST						
16								

COLOR MODE indication of second row/35th columns displays the default.  
(It is not controlled with the COLOR MODE in adjustment.)

Display color : White  
Half tone : Blue (second row / 15th row for each 5 to 36th columns)

### ●Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	CONTRAST	Call the adjustment value and display it.		×
AA02	2	BRIGHT			×
AA03	3	COLOR			×
AA04	4	TINT			×
AA05	5	R HIGH			×
AA06	6	G HIGH			×
AA07	7	B HIGH			×
AA08	8	R LOW			×
AA09	9	G LOW			
AA00	10	B LOW			
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	»	Adjustment value of the parameter selecting goes up.			
AA95	«	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	INITIALIZE		

### ●Operating specification

- Start from CONTRAST (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- It becomes COLOR MODE2 during COLOR MODE adjustment. However, do not perform the last memory of setting.  
(Perform last memory of the adjustment value.)

### ③ COLOR TEMP Adjustment

[illegible]

Display color : White  
Half tone : Blue (second row / 15th row for each 5 to 36th columns)

- **Basic Operation**

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	CONTRAST	Call the adjustment value and display it.		×
AA02	2	BRIGHT			×
AA03	3	COLOR			×
AA04	4	TINT			×
AA05	5	R HIGH			×
AA06	6	G HIGH			×
AA07	7	B HIGH			×
AA08	8	R LOW			×
AA09	9	G LOW			×
AA00	10	B LOW			×
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	≫	Adjustment value of the parameter selecting goes up.			
AA95	≪	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	INITIALIZE		

- **Operating specification**

- Start from CONTRAST (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- Works by the selected COLOR TEMP setting during COLOR TEMP adjustment. However, do not perform the last memory of setting and maintain the "MIDDLE". (Perform last memory of the adjustment value.)

## 7. INITIALIZE

1	5	10	15	20	25	30	35	40
1								
5								
10								
15								
16								

Display color : White  
 Half tone : Blue (second row / 15th row for each 5 to 36th columns)

### •Basic Operation

- Perform the modification and confirmation of various setting.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	COLOR DET	...→EURO→SA→ALL→...		×
AA02	2	EEP CHECK	EEPROM writing check		×
AA03	3	ACL SW	ON ↔ OFF		×
AA04	4	INTEGRATOR MODE	...→LOCK→UNLOCK→...		×
AA05	5	P&P WRITE ENA	For Plug & Play EEPROM writing		×
AA06	6	HOURLMETER SET	Set the current hourmeter	Shift to setting screen at SET (AA8A)	○
AA07	7	PULSEMETER SET	Set the pulse hourmeter	Shift to setting screen at SET (AA8A)	○
AA08	8	FINAL SET UP		Execute at SET (AA8A)	×
AA09	9	VIDEO STANDARD	...→0→1→2→3→4→5→6→7→8→9→A...		×
AA00	10	PC STANDARD	...→0→1→2→3→4→5→6→7→8→9→A...		×
AA46	11	VIDEO MODE1	...→0→1→2→3→4→5→6→7→8→9→A...		×
AA47	12	PC MODE1	...→0→1→2→3→4→5→6→7→8→9→A...		×
AA4D	BS1	EEP DATA READ		Shift to setting screen at SET (AA8A)	○
AA4E	BS3	MASK1		Shift to setting screen at SET (AA8A)	○
AA4F	BS5	MASK2		Shift to setting screen at SET (AA8A)	○
AA50	BS7	MEMO		Shift to writing screen at SET (AA8A)	○
AA51	BS9	SERVICE PARTS		Execute at SET (AA8A)	×
AA52	BS11	PICTURE DEFAULT		Execute at SET (AA8A)	×
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	»	Select the function			
AA95	«	Select the function			
AA8A	SET	Select the item and shift to lower layer, or store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	INFORMATION		

### ●Operating specification

- Start from COLOR DET (Key 1) when shifted to this setting screen.  
However, the movement original item to be selected when shifted from the lower layer.
- When each key was pressed, follow the required operation.
- Perform the last memory of COLOR DET., ACL SW, INTE. MODE, MEMO, VIDEO STANDARD, PC STANDARD, VIDEO MODE1, PC MODE1, HOURMETER SET, PULSEMETER SET, FINAL SET UP, MASK1, MASK2 and PICTURE DEFAULT.

### ●Function description

1. COLOR DET. : Set the color detection system.  
→ EURO → SA → ALL →
2. EEP CHECK: Check the EEPROM writing  
Display lower two places with the hexadecimal number of the result that added data to subaddress 1760-177C (PDC XGA/SHARP data) of EEPROM.
3. ACL SW: Set the ACL.
4. INTEGRATOR MODE: Set the integrator protection.
5. P&P WRITE ENA: Set the writing permission of the EEPROM for Plug & Play.
6. HOURMETER SET: Display and set the hourmeter.

1	5	10	15	20	25	30	35	40
1								
5								
10								
15								
16								

Can change three places of upper rank of SETDATA.

▲▼ : Select numeric value.

◀▶ : Can select three places of upper rank.

SET : Shift to the setting modification and confirmation screen.

1	5	10	15	20	25	30	35	40
1								
5								
10								
15								
16								

◀▶ : YES/NO selection

SET : Store the SET DATA at YES selection and shift to INIT screen.  
Hold the NOW DATA at NO selection and shift to INIT screen.

7. PULSEMETER SET: Display and set the pulse meter.

1	5	10	15	20	25	30	35	40
1								
5								
10								
15								
16								

Can change three places of upper rank of SETDATA.

▲▼ : Select numeric value.

◀▶ : Can select three places of upper rank.

SET : Shift to the setting modification and confirmation screen.

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[illegible]

<<>> : YES/NO selection  
 SET : Store the SET DATA at YES selection  
       and shift to INIT screen.  
       Hold the NOW DATA at NO selection  
       and shift to INIT screen.

8. **FINAL SET UP:** Setting to the factory shipping state.  
(Refer to the Final Setup Details.)
9. **VIDEO STANDARD:** Set the peak occurrences of STANDARD (USER MENU / POWER CONTROL) in the video system signal.  
(Set the following table 1.) Note: Please do not perform the change of setting in the service.
10. **PC STANDARD:** Set the peak occurrences of STANDARD (USER MENU / POWER CONTROL) in the PC system signal.  
(Set the following table 2.) Note: Please do not perform the change of setting in the service.
11. **VIDEO MODE1:** Set the peak occurrences of MODE1 (USER MENU / POWER CONTROL) in the video system signal.  
(Set the following table 3.) Note: Please do not perform the change of setting in the service.
12. **PC MODE1:** Set the peak occurrences of MODE1 (USER MENU / POWER CONTROL) in the PC system signal.  
(Set the following table 4.) Note: Please do not perform the change of setting in the service.

		Current Input Signal	
		VIDEO	PC
POWER CONTROL setting	STANDARD mode	Table1	Table2
	MODE1	Table3	Table4
	MODE2	PL6 (fixed)	

13. **EEP DATA READ:** Display the each address data of EEPROM.

	1	5	10	15	20	25	30	35	40
1									
5									
10									
15									
16									

<<>> : Select the address (four places) place.  
 ▲▼ : Select numeric value.  
 SET : Shift to upper layer.  
 Update display data (hex) every address modification.

Display color : White (Selected address is yellow)  
 Half tone : Blue (second row / 15th row for  
 each 5 to 36th columns)

14. MASK1: Select the full mask. (Refer to "① MASK1" .)  
Note: Mask 1/2 are commonness and perform one item last memory.
15. MASK2: Select the mask pattern. (Refer to "② MASK2" .)  
Note: Mask 1/2 are commonness and perform one item last memory.

**Caution:** (item 14, 15 commonness)

- When key operation is done and performs OSD display, turns OFF FULL MASK for two seconds and display OSD. (common to in all modes)
- In FULL MASK selection (in MASK selection menu), Select the mask and turn off OSD two seconds later of no operation, and MASK screen displays.
- Perform MASK determination (press "SET"), and FULL MASK screen display starts.
- Release of the mask is possible only with "M00" with the RS-232C factory adjustment mode or "MASK OFF" of the service factory menu. (Release is impossible with "FULL MASK OFF" of the integrator menu and "FMN:" of the RS-232C command.)

16. MEMO: Display and edit the memo data.

1	5	10	15	20	25	30	35	40	
1	INFO		#1-S1-IN4-02-2*NT						
5	MEMO								
	-----								
	-----								
10	-----								
	-----								
15			BACK						
16									

<MEMO/SELECT>

- Select MEMO to edit with ▲▼ keys.
- Shift to the <MEMO/EDIT> screen with the SET key.
- When selects BACK and presses the SET key, shift to the upper layer.

1	5	10	15	20	25	30	35	40					
1	MEMO												
5	PDP-503MX				BACK SPACE								
	A	B	C	D	E	F	G	H	I	J	K	L	M
	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
	0	1	2	3	4	5	6	7	8	9	.	,	
10	`	'	/	-	(	)	@	*	:	#	?	&	~
	RESET				SPACE				END				
15													
16	◀	▲	▶	SELECT	SET	SET	MENU	EXIT					

<MEMO/EDIT>

- Editing technique refers to the step of INPUT label of the user menu.
- Default is "-----" display. (□ shows space.)
- When "RESET" was pressed, display returns to the default display setting.

17. SERVICE PARTS : Rewrite a PD number of the module microcomputer to the parts recognition number for service.

Refer to "7.1.3 AUTOMATIC BACKUP OF DIGITAL VIDEO ASSY DATA".

For service recognition number: Modify the first column of the PD number to F

**Caution:** Only the EEPROM for the module microcomputer to modify the service recognition number.

A service identification number of module microcomputer data area in EEPROM for main microcomputer does not rewrite it.

Examples: F691 (an original PD number is 5691).

18. PICTURE DEFAULT

- The data which adjusted in the service factory mode reflect as default value of PICTURE, WHITE BAL and SIDE MASK LEVEL of the integrator menu.
- The value that adjusted in the service factory mode is not reflected to all video output data except the service factory mode so long as does not execute "PICTURE DEFAULT" or "FINAL SETUP".
- Execute "PICTURE DEFAULT" after the adjustment for the value that adjusted in the service factory mode is reflected to video output data.

**Note:** When executed "PICTURE DEFAULT"

- ① All the PICTURE items of the user menu are reset.
- ② PICTURE, WHT BAL and SIDE MASK LEVEL of the integrator menu become default value all in base with the current factory adjustment value.

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## ● FINAL SETUP Details

Items		Initial Setting	Remarks
Key Remote control input			
Power supply (STANDBY/ON)			NO CARE
Input function		INPUT1	
Screen size	VIDEO	WIDE	(In the video signal input) Every each input function
	PC	① DOT BY DOT	(In the PC signal input) Every each input function and signal mode Priority sequence is ① → ② → ③
		② 4 : 3 (included TYPE)	
		③ FULL (included TYPE)	
Vertical position adjustment (V scroll)		0	Every each input function (at VIDEO)
KEY LOCK		UNLOCK	All input functions are common
VOLUME		0	
User menu setting item			
PICTURE		Default value of all adjustment	Every each input function and signal mode
SCREEN		Default value of all adjustment	Every each input function and signal mode (at PC)
INPUT LABEL		□INPUT*□	(*: 1 to 5). Every each input function
AUTO POWER OFF		OFF	Every each input function
POWER MANAGEMENT		OFF	INPUT1 (at PC) /5
COLOR TEMP		MIDDLE	Every each input function (at VIDEO)
DIGITAL NR		LOW	
HIGH CONTRAST		OFF	
PURECINEMA		OFF	Every each input function (at 525i (NTSC))
COLOR SYSTEM		AUTO	Every each INPUT3/4
CLAMP POSITION		AUTO	Every each INPUT1/2
3D Y/C MODE		MOTION	INPUT 4
SETTING		VGA (at mode03, 31, E1)	Every INPUT 1/2
		XGA (at mode61, 71, 63, 73)	
VIDEO SIGNAL		RGB	
POWER CONTROL		STANDARD	(VIDEO/PC) All input functions are common
AUTO FUNCTION		OFF	All input functions are common
AUDIO OUT		FIXED	
Integrator menu setting item			
PICTURE		Default value of all adjustment items	Every each input function and signal mode
WHITE BALANCE		Default value of all adjustment items	
SCREEN		Default value of all adjustment items	
2×2 MODE		OFF/Upper left	Every each input function
BRT. ENHANCE	VIDEO	OFF	
	PC	OFF	Every each function that the PC input is possible
HDTV MODE		1035i	All input functions are common
VIDEO INPUT		COMPONENT1	750p/1125i/1125p
		COMPONENT2	525i/525p/625i/625p
SUB VOLUME		60	Every input function
OSD		ON	Set is common
BAUD RATE		4800BPS	
TIMER		OFF/1/0.0/WHT	(Setting/Timer time/Mask time/mask color) All input functions are common



Items		Initial Setting	Remarks
FULL MASK		OFF	Set is common
SIDE MASK	R LEVEL	Default value	
	G LEVEL	Default value	
	B LEVEL	Default value	
MASK CONTROL		ON	Set is common
ORBITER MODE		OFF	
INVERSE MODE		OFF	
COLOR MODE		MODE1	
MIRROR MODE		OFF	Set is common
FAN CONTROL		AUTO	
MONITOR NAME		□□□PLASMA□□□	
ID NO SET		--	
SLOT INPUT		VIDEO (RGB)	
<b>Factory Setting Item</b>			
INTE MODE		UNLOCK	Set is common
MASK1/2 setting		OFF	
ACL SW		ON	
COLOR DET			NO CARE
<b>RS-232C Setting Item</b>			
VIDEO MUTE		OFF	Set is common
LED		ON	
100% display		OFF	

① MASK1

Display color : White  
Half tone : Blue (second row / 15th row for  
each 5 to 36th columns)

Perform the adjustment of each parameter.

- Operating specification

- Caution:** In the MASK setting, do not display the OSD.

When other operations were selected, perform OSD display after MASK OFF for two seconds. Then return to selected FULL MASK display.

② MASK2

1	5	10	15	20	25	30	35	40
1								
5								
10								
15								
16								

Display color : White  
Half tone : Blue (second row / 15th row for each 5 to 36th columns)

●Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	MASK OFF		OFF	×
AA02	2	MASK 01		Pattern 1 (Ramp)	×
AA03	3	MASK 02		Pattern 2 (Color-bar)	×
AA04	4	MASK 03		Pattern 3 (Slanting line)	×
AA05	5	MASK 04		Pattern 4 (For W/B Lo-Light adjustment 1/5Window (14%, 56%))	×
AA06	6	MASK 05		Pattern 5 (For W/B Lo-Light adjustment 1/5Window (Pred, Skin))	×
AA07	7	MASK 06		Pattern 6 (For W/B Peak adjustment 1/5Window (100%))	×
AA08	8	MASK 07		Pattern 7 (Peak signal : For peak measurement and adjustment 1/5Window (100%))	×
AA09	9	MASK 08		Pattern 8 (Reservation)	×
AA00	10	MASK 09		Pattern 9 (For scan IC protection test Window-A)	×
AA46	11	MASK 10		Pattern 10 (For scan IC protection test Window-B)	×
AA47	12	MASK 11		Pattern 11 (Reservation)	×
AA4D	BS1	MASK 12		Pattern 12 (Reservation)	×
AA4E	BS3	MASK 13		Pattern 13 (Reservation)	×
AA4F	BS5	MASK 14		Pattern 14 (Reservation)	×
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select the upper item			
AA97	▼	Select the lower item			
AA94	»	Select free-running frequency	↔→50Hz→60Hz→70Hz→↔	Default is 60 Hz	
AA95	«	Select free-running frequency	↔→50Hz→60Hz→70Hz→↔	Default is 60 Hz	
AA8A	SET	Store the selected item and shift to upper layer			
AAD3-AF70	AUDIO	Shift to various adjustment / setting screen.	INFORMATION		
AA4A	DISPLAY CALL		RANGE CHECK		
AA1D	SURROUND MODE		REFERENCE		
AA59	AV SELECT		OFFSET		
AA43	AV MEMORY		VIDEO OPTION		
AA1E	MPX		INITIALIZE		
AAD3-AF3C	SCREEN SIZE				
AAD3-AF36	FULL AUTO ZOOM				
AAD3-AF22	P.ZOOM				
AA49	MUTING	Shift to next adjustment / setting screen.	INFORMATION		

●Operating specification

- Start from MASK OFF (Key1) when shifted to this setting screen. However, set MASK position is a default when sets an either mask already.
- When entered this mode by the state that either MASK set of MASK1, setting of MASK1 is off, and MASK 1 starts from MASK OFF (Key1).
- When a key was pressed, follow the required operation after performed the last memory of the current adjustment value.

**Caution:** In the MASK setting, do not display the OSD.

When other operations were selected, perform OSD display after MASK OFF for two seconds.  
Then return to selected MASK display.

## ● Cassification 1 of Input Signal Mode (VIDEO)

SIG Mode	Signal Type	OSD display	V. Frequency fv (Hz)	H. Frequency fh (Hz)	Display Pixel Number	INPUT5 (DVI input) Correspondence
00・5 00・6 00・7 00・8 00・9	SDTV・625i (PAL/SECAM)	(100% tentative) 4 : 3 FULL ZOOM WIDE	50	15.6	1280 × 768 984 × 768 1280 × 768 1280 × 768 1280 × 768	× (no-correspondence)
01・5 01・6 01・7 01・8 01・9	SDTV・625p (PAL・Progressive)	(100% tentative) 4 : 3 FULL ZOOM WIDE	50	31.2	1280 × 768 984 × 768 1280 × 768 1280 × 768 1280 × 768	× (no-correspondence)
02・5 02・6 02・7 02・8 02・9	SDTV・525i (NTSC/4.43NTSC)	(100% tentative) 4 : 3 FULL ZOOM WIDE	60	15.7	1280 × 768 984 × 768 1280 × 768 1280 × 768 1280 × 768	× (no-correspondence)
03・5 03・6 03・7 03・8 03・9	SDTV・525p (NTSC・Progressive)	(100% tentative) 4 : 3 FULL ZOOM WIDE	60	31.5	1280 × 768 984 × 768 1280 × 768 1280 × 768 1280 × 768	× (no-correspondence)
11・5 11・7	HDTV・1125i (1080 number of effective scanning lines)	(100%) FULL	50	28.1	1280 × 768 1280 × 768	× (no-correspondence)
12・5 12・7	HDTV・1125i (1080 number of effective scanning lines)	(100%) FULL	60	33.8	1280 × 768 1280 × 768	× (no-correspondence)
13・5 13・7	HDTV・1125i (1035 number of effective scanning lines)	(100%) FULL	60	33.8	1280 × 768 1280 × 768	× (no-correspondence)
14・5 14・7	HDTV・750p (720 number of effective scanning lines)	(100%) FULL	60	45.0	1280 × 768 1280 × 768	× (no-correspondence)
15・5 15・7	HDTV・1125p (1080 number of effective scanning lines)	(100%) FULL	60	67.5	1280 × 768 1280 × 768	× (no-correspondence)

## ● Classification 2 of Input Signal Mode (PC)

SIG Mode	Signal Type	OSD Display	V. Frequency v (Hz)	H. Frequency h (Hz)	Display Pixel Number	INPUT5 (DVI input) Correspondence
20 • 2	640 × 400	FULL	56	24.8	1280 × 768	× (non-correspondence)
23 • 2	640 × 400	FULL	70	31.5	1280 × 768	△ (correspond informally)
31 • 0 31 • 1 31 • 2	640 × 480	DOT BY DOT 4 : 3 FULL	60	31.5	640 × 480 1024 × 768 1280 × 768	○ (correspondence)
32 • 0 32 • 1 32 • 2	640 × 480	DOT BY DOT 4 : 3 FULL	66	35.0	640 × 480 1024 × 768 1280 × 768	△ (correspond informally)
34 • 0 34 • 1 34 • 2	640 × 480	DOT BY DOT 4 : 3 FULL	72	37.9	640 × 480 1024 × 768 1280 × 768	△ (correspond informally)
35 • 0 35 • 1 35 • 2	640 × 480	DOT BY DOT 4 : 3 FULL	75	37.5	640 × 480 1024 × 768 1280 × 768	△ (correspond informally)
36 • 0 36 • 1 36 • 2	640 × 480	DOT BY DOT 4 : 3 FULL	85	43.3	640 × 480 1024 × 768 1280 × 768	△ (correspond informally)
40 • 4 40 • 1 40 • 2	800 × 600	DOT BY DOT 4 : 3 FULL	56	35.1	800 × 600 1024 × 768 1280 × 768	○ (correspondence)
41 • 0 41 • 1 41 • 2	800 × 600	DOT BY DOT 4 : 3 FULL	60	37.9	800 × 600 1024 × 768 1280 × 768	○ (correspondence)
44 • 0 44 • 1 44 • 2	800 × 600	DOT BY DOT 4 : 3 FULL	72	48.1	800 × 600 1024 × 768 1280 × 768	△ (correspond informally)
45 • 0 45 • 1 45 • 2	800 × 600	DOT BY DOT 4 : 3 FULL	75	46.9	800 × 600 1024 × 768 1280 × 768	△ (correspond informally)
46 • 0 46 • 1 46 • 2	800 × 600	DOT BY DOT 4 : 3 FULL	85	53.7	800 × 600 1024 × 768 1280 × 768	△ (correspond informally)
55 • 0 55 • 1 55 • 2	832 × 624	DOT BY DOT 4 : 3 FULL	75	49.7	832 × 624 1024 × 768 1280 × 768	△ (correspond informally)
61 • 1 61 • 2	1024 × 768	DOT BY DOT FULL	60	48.4	1024 × 768 1280 × 768	○ (correspondence)
63 • 1 63 • 2	1024 × 768	DOT BY DOT FULL	70	56.5	1024 × 768 1280 × 768	△ (correspond informally)
65 • 1 65 • 2	1024 × 768	DOT BY DOT FULL	75	60.0	1024 × 768 1280 × 768	△ (correspond informally)
66 • 1 66 • 2	1024 × 768	DOT BY DOT FULL	85	68.7	1024 × 768 1280 × 768	△ (correspond informally)
70 • 2	1280 × 768	DOT BY DOT	56	45.1	1024 × 768	○ (correspondence)
71 • 2	1280 × 768	DOT BY DOT	60	48.1	1024 × 768	○ (correspondence)
73 • 2	1280 × 768	DOT BY DOT	70	55.5	1024 × 768	△ (correspond informally)

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SIG Mode	Signal Type	OSD Display	V. Frequency v (Hz)	H. Frequency h (Hz)	Display Pixel Number	INPUT5 (DVI input) Correspondence
81 • 1 81 • 2	1152 × 864	4 : 3 (TYPE) FULL (TYPE)	60	53.7	1024 × 768 1280 × 768	○ (correspondence)
84 • 1 84 • 2	1152 × 864	4 : 3 (TYPE) FULL (TYPE)	72	64.9	1024 × 768 1280 × 768	△ (correspond informally)
85 • 1 85 • 2	1152 × 864	4 : 3 (TYPE) FULL (TYPE)	75	67.5	1024 × 768 1280 × 768	△ (correspond informally)
95 • 1 95 • 2	1152 × 870	4 : 3 (TYPE) FULL (TYPE)	75	68.7	1016 × 768 1280 × 768	△ (correspond informally)
A2 • 1 A2 • 2	1152 × 900	4 : 3 (TYPE) FULL (TYPE)	66	62.0	984 × 768 1280 × 768	△ (correspond informally)
A5 • 1 A5 • 2	1152 × 900	4 : 3 (TYPE) FULL (TYPE)	76	71.7	984 × 768 1280 × 768	△ (correspond informally)
B1 • 1 B1 • 2	1280 × 960	4 : 3 (TYPE) FULL (TYPE)	60	60.0	1024 × 768 1280 × 768	○ (correspondence)
C1 • 1 C1 • 2 C1 • 3	1280 × 1024	4 : 3 (TYPE) FULL (TYPE) PARTIAL	60	64.0	960 × 768 1280 × 768 1280 × 768	○ (correspondence)
C5 • 1 C5 • 2	1280 × 1024	4 : 3 (TYPE) FULL (TYPE)	75	80.0	960 × 768 1280 × 768	× (non-correspondence)
C6 • 1 C6 • 2	1280 × 1024	4 : 3 (TYPE) FULL (TYPE)	85	91.1	960 × 768 1280 × 768	× (non-correspondence)
D1 • 1 D1 • 2	1600 × 1200	4 : 3 (TYPE) FULL (TYPE)	60	75.0	1024 × 768 1280 × 768	× (non-correspondence)
D2 • 1 D2 • 2	1600 × 1200	4 : 3 (TYPE) FULL (TYPE)	65	81.3	1024 × 768 1280 × 768	× (non-correspondence)
D3 • 1 D3 • 2	1600 × 1200	4 : 3 (TYPE) FULL (TYPE)	70	87.5	1024 × 768 1280 × 768	× (non-correspondence)
D5 • 1 D5 • 2	1600 × 1200	4 : 3 (TYPE) FULL (TYPE)	75	93.8	1024 × 768 1280 × 768	× (non-correspondence)
D6 • 1 D6 • 2	1600 × 1200	4 : 3 (TYPE) FULL (TYPE)	85	106.3	1024 × 768 1280 × 768	× (non-correspondence)
E1 • 1 E1 • 2	852 × 480	DOT BY DOT FULL	60	31.7	852 × 480 1280 × 768	○ (correspondence)

## 6.2 ADJUSTMENT REQUIRED WHEN THE SET IS REPAIRED OR REPLACED

### ■ RGB Assy

#### ● When repaired

1. Adjustment is impossible when replaced the Matrix IC or AD/PLL/AMP IC.
2. Adjustment is unnecessary in case of others.

#### ● When replaced

White balance adjustment

### ■ SW POWER SUPPLY Module

#### ● When replaced

No adjustment required.

### ■ DIGITAL VIDEO Assy

#### ● When repaired

No adjustment required.

#### ● When replaced

1. Adjustment is unnecessary when replaced only the DIGITAL VIDEO Assy.
2. When replaced it with RGB Assy simultaneously, remove IC1204 (24LC04(1) SN-TBB) from the former PC Board to replace, and install it to the new PC Board.
3. When use new Assy which replaces it and recovered as service parts once again, replace IC1204 with new IC.

### ■ Y DRIVE Assy

#### ● When repaired

1. VOFS/VH/IC5V voltage adjustment
2. Timing adjustment of pulse module

#### ● When replaced

1. SUSB ground timing adjustment
2. Panel white balance adjustment

### ■ X DRIVE Assy

#### ● When repaired

1. VRN voltage adjustment
2. Timing adjustment of pulse module

#### ● When replaced

1. SUSB ground timing adjustment
2. Panel white balance adjustment

### ■ Video Card (PDA-5002)

#### ● When repaired

1. Y LEVEL adjustment
2. Color difference and TINT adjustment

#### ● When replaced

No adjustment required.

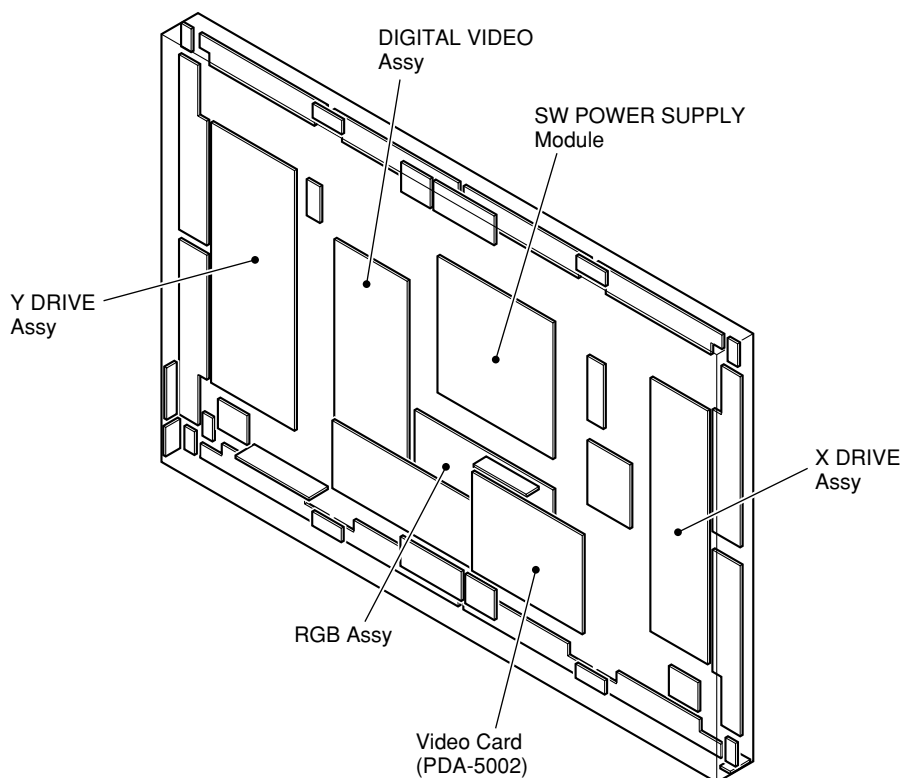
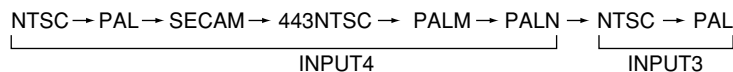


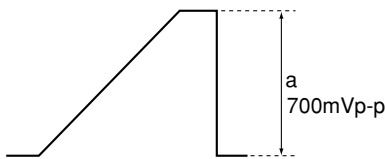
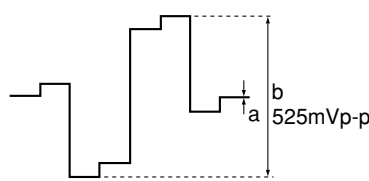
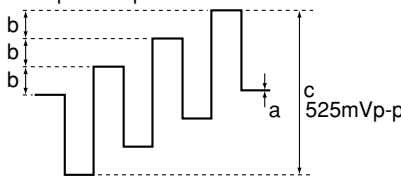
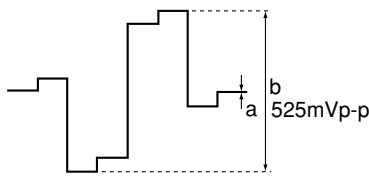
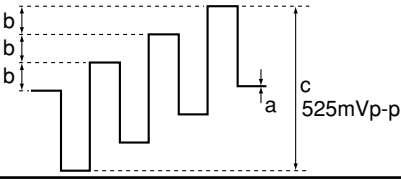
Fig. 1 PC Board Location (rear side view)

## 6.3 ADJUSTMENT

### 6.3.1 Video Card Adjustment

- Adjust after controlling each IC.
- Perform it from step 1 to step 6 every each input signal.



Step	Adjustment Item	Input Signal	Control	Measuring Point	Adjusting Value	Adjusting Method
1	Y Level Adjustment (IC7130)(SA83)	RAMP	IC7302	CN7401-pin 3	700mVp-p	Adjust Level so that the peak to peak of waveform becomes 700 mVp-p. 
2	R-Y Offset Adjustment (IC7130)(SA88)	Color-Bar	IC7302	CN7401-pin 7	525mVp-p	a: Adjust Offset so that the pedestal level becomes fixed. b: Adjust Level so that the peak to peak of waveform becomes 525 mVp-p. 
3	B-Y Offset Adjustment (IC7130)(SA88)	Color-Bar	IC7302	CN7401-pin 5	525mVp-p	a: Adjust Offset so that the pedestal level becomes fixed. b: Adjust TINT so that the height ratio of each stair step waveform becomes fixed. c: Adjust Level so that the peak to peak of waveform becomes 525 mVp-p. 
4	TINT Adjustment (IC7130)(SA80)					
5	R-Y Level Adjustment (IC7103)(SA101)	Color-Bar	IC7103	CN7401-pin 7	525mVp-p	a: Adjust Offset so that the pedestal level becomes fixed. b: Adjust Level so that the peak to peak of waveform becomes 525 mVp-p. 
6	B-Y Level Adjustment (IC7103)(SA100)	Color-Bar	IC7103	CN7401-pin 5	525mVp-p	a: Adjust Offset so that the pedestal level becomes fixed. b: Adjust TINT so that the height ratio of each stair step waveform becomes fixed. c: Adjust Level so that the peak to peak of waveform becomes 525 mVp-p. 

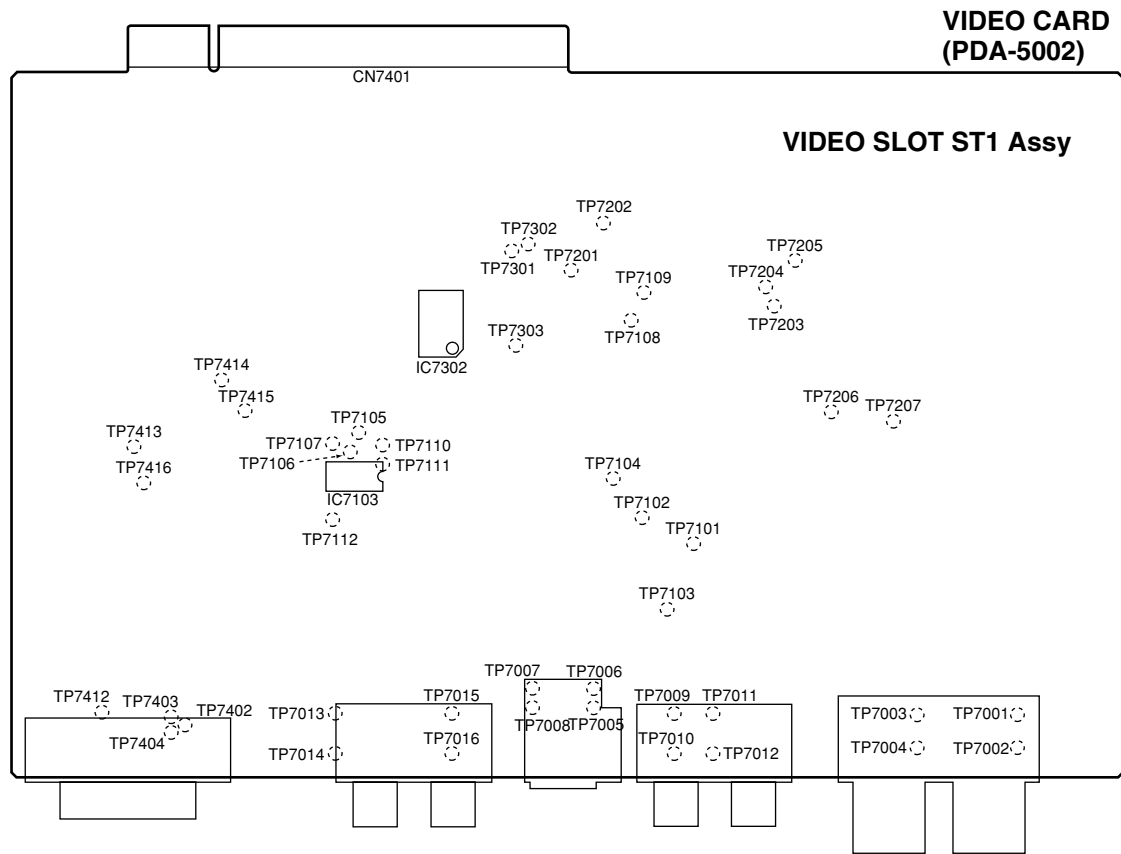
Each adjustment value which adjusted, store the adjustment data in IC7104.



### ● Operating Check

After each adjustment was completed, confirm the following signals are output rightly.

- INPUT3 input signal
- INPUT4 input signal
- INPUT5 input signal
- Signal distinction circuit operation
- Audio signal



Adjustment Points

## 6.3.2 Main Unit Adjustment

### ■ VOFS/VH/IC5V Voltage Adjustment

Input Signal	Adjusting Point	Adjusting Method																																																																																																																																				
White 100%	VR2701 (VOFS) (Y DRIVE Assy)	<p><b>VOFS (Offset voltage) adjustment</b></p> <p><b>Method 1</b></p> <p>1. Write down a adjustment value of V-OFFSET of REF-DIG mode in the factory mode.</p> <p>2. Set this adjustment value to center (128).</p> <p>3. Adjust VR2701 so that the voltage between K2701 (VOFS) and K2703 (SUS GND) becomes 45V.</p> <p>4. Return it to the value that wrote down a adjustment value of V-OFFSET in step 1.</p> <p><b>Method 2</b></p> <p>1. Read the adjustment value of V-OFFSET of REF-DIG mode in the factory mode.</p> <p>2. Adjust VR2701 so that the voltage between K2710 (VOFS) and K2703 (SUS GND) becomes following voltage <math>\pm 0.5V</math>.</p> <table><thead><tr><th>Input Command</th><th>DAC Output</th><th>Setting Voltage</th><th>Input Command</th><th>DAC Output</th><th>Setting Voltage</th></tr></thead><tbody><tr><td>VOF000</td><td>0.4</td><td>25</td><td>VOF134</td><td>2.599212598</td><td>45.94488</td></tr><tr><td>VOF006</td><td>0.4984375</td><td>25.9375</td><td>VOF141</td><td>2.71496063</td><td>47.04724</td></tr><tr><td>VOF013</td><td>0.61328125</td><td>27.03125</td><td>VOF147</td><td>2.814173228</td><td>47.99213</td></tr><tr><td>VOF019</td><td>0.71171875</td><td>27.96875</td><td>VOF153</td><td>2.913385827</td><td>48.93701</td></tr><tr><td>VOF026</td><td>0.8265625</td><td>29.0625</td><td>VOF160</td><td>3.029133858</td><td>50.03937</td></tr><tr><td>VOF032</td><td>0.925</td><td>30</td><td>VOF166</td><td>3.128346457</td><td>50.98425</td></tr><tr><td>VOF038</td><td>1.0234375</td><td>30.9375</td><td>VOF172</td><td>3.227559055</td><td>51.92913</td></tr><tr><td>VOF045</td><td>1.13828125</td><td>32.03125</td><td>VOF179</td><td>3.343307087</td><td>53.0315</td></tr><tr><td>VOF051</td><td>1.23671875</td><td>32.96875</td><td>VOF185</td><td>3.442519685</td><td>53.97638</td></tr><tr><td>VOF058</td><td>1.3515625</td><td>34.0625</td><td>VOF191</td><td>3.541732283</td><td>54.92126</td></tr><tr><td>VOF064</td><td>1.45</td><td>35</td><td>VOF198</td><td>3.657480315</td><td>56.02362</td></tr><tr><td>VOF070</td><td>1.5484375</td><td>35.9375</td><td>VOF204</td><td>3.756692913</td><td>56.9685</td></tr><tr><td>VOF077</td><td>1.66328125</td><td>37.03125</td><td>VOF211</td><td>3.872440945</td><td>58.07087</td></tr><tr><td>VOF083</td><td>1.76171875</td><td>37.96875</td><td>VOF217</td><td>3.971653543</td><td>59.01575</td></tr><tr><td>VOF090</td><td>1.8765625</td><td>39.0625</td><td>VOF223</td><td>4.070866142</td><td>59.96063</td></tr><tr><td>VOF096</td><td>1.975</td><td>40</td><td>VOF230</td><td>4.186614173</td><td>61.06299</td></tr><tr><td>VOF102</td><td>2.0734375</td><td>40.9375</td><td>VOF236</td><td>4.285826772</td><td>62.00787</td></tr><tr><td>VOF109</td><td>2.18828125</td><td>42.03125</td><td>VOF242</td><td>4.38503937</td><td>62.95276</td></tr><tr><td>VOF115</td><td>2.28671875</td><td>42.96875</td><td>VOF249</td><td>4.500787402</td><td>64.05512</td></tr><tr><td>VOF122</td><td>2.4015625</td><td>44.0625</td><td>VOF255</td><td>4.6</td><td>65</td></tr><tr><td>VOF128</td><td>2.5</td><td>45</td><td></td><td></td><td></td></tr></tbody></table> <p><b>The symptom is case of mis-adjustment</b></p> <p>If the VOFS Voltage adjustment is not performed properly, dots like blinking luminance points appear. If deviated greatly from the right adjustment point, panel will light white.</p>	Input Command	DAC Output	Setting Voltage	Input Command	DAC Output	Setting Voltage	VOF000	0.4	25	VOF134	2.599212598	45.94488	VOF006	0.4984375	25.9375	VOF141	2.71496063	47.04724	VOF013	0.61328125	27.03125	VOF147	2.814173228	47.99213	VOF019	0.71171875	27.96875	VOF153	2.913385827	48.93701	VOF026	0.8265625	29.0625	VOF160	3.029133858	50.03937	VOF032	0.925	30	VOF166	3.128346457	50.98425	VOF038	1.0234375	30.9375	VOF172	3.227559055	51.92913	VOF045	1.13828125	32.03125	VOF179	3.343307087	53.0315	VOF051	1.23671875	32.96875	VOF185	3.442519685	53.97638	VOF058	1.3515625	34.0625	VOF191	3.541732283	54.92126	VOF064	1.45	35	VOF198	3.657480315	56.02362	VOF070	1.5484375	35.9375	VOF204	3.756692913	56.9685	VOF077	1.66328125	37.03125	VOF211	3.872440945	58.07087	VOF083	1.76171875	37.96875	VOF217	3.971653543	59.01575	VOF090	1.8765625	39.0625	VOF223	4.070866142	59.96063	VOF096	1.975	40	VOF230	4.186614173	61.06299	VOF102	2.0734375	40.9375	VOF236	4.285826772	62.00787	VOF109	2.18828125	42.03125	VOF242	4.38503937	62.95276	VOF115	2.28671875	42.96875	VOF249	4.500787402	64.05512	VOF122	2.4015625	44.0625	VOF255	4.6	65	VOF128	2.5	45			
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	VR2703 (VH) (Y DRIVE Assy)	<p><b>VH (voltage for scan IC) Adjustment</b></p> <p>Adjust so that the voltage between K2716 (VH) and K2720 (PSUS) becomes <math>103V \pm 0.5V</math>. PSUS (=GNDH) is a floating GND and the electric potential is different from that of chassis GND. Be sure not to short-circuit PSUS (=GNDH) and another GND, because that may damage the unit.</p> <p><b>The symptom is case of mis-adjustment</b></p> <p>If the VH adjustment is not performed properly, dots like blinking luminance points appear. If deviated greatly from the right adjustment point, panel will light white.</p>																																																																																																																																				
	VR2702 (IC5V) (Y DRIVE Assy)	<p><b>IC5V Adjustment</b></p> <p>Adjust so that the voltage between K2707 (IC5V) and K2720 (PSUS) becomes <math>5.0V \pm 0.1V</math>. PSUS (=GNDH) is a floating GND and the electric potential is different from that of chassis GND. Be sure not to short-circuit PSUS (=GNDH) and another GND, because that may damage the unit.</p>																																																																																																																																				
Note : Be sure to measure between specified test points.																																																																																																																																						

## ■ Sustain Pulse Waveform Adjustment

Input Signal	Adjusting Point	Adjusting Method
White 100%	REF_DIG mode in Factory mode X-SUS-B : key 9 Y-SUS-B : key 11	<b>X-SUS-B, Y-SUS-B Adjustment</b> Set to the indicated value with a key on the remote control unit. (Refer to "Timing adjustment of control signal of X and Y Drive Assys".)

## ■ VRN Voltage Adjustment

Input Signal	Adjusting Point	Adjusting Method
White 100%	VR3701 (VRN) (X DRIVE Assy)	<b>VRN (minus reset voltage adjustment)</b> Adjust so that the voltage between K3707 (VRN) and K3702 (SUS-GND) becomes $-300V \pm 1.0V$ .

## ■ Panel White Balance Adjustment

Input Signal	Adjusting Point	Adjusting Method									
		<p>Adjust the parameter in the OFFSET-DIGITAL of factory mode as follows;</p> <div style="text-align: center;"> <div style="display: inline-block; vertical-align: middle;"> PANEL R-HIGH  <span style="font-size: 2em; vertical-align: middle;">}</span>  PANEL B-LOW </div> </div> <p>In this time, display uses the mask (MASK04) of factory mode.</p> <p>Reference : Adjustment values using the Media color-difference meter (A-100)</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th><th>MASK Left Side</th><th>MASK Right Side</th></tr> </thead> <tbody> <tr> <td>x</td><td>295</td><td>291</td></tr> <tr> <td>y</td><td>306</td><td>300</td></tr> </tbody> </table>		MASK Left Side	MASK Right Side	x	295	291	y	306	300
	MASK Left Side	MASK Right Side									
x	295	291									
y	306	300									

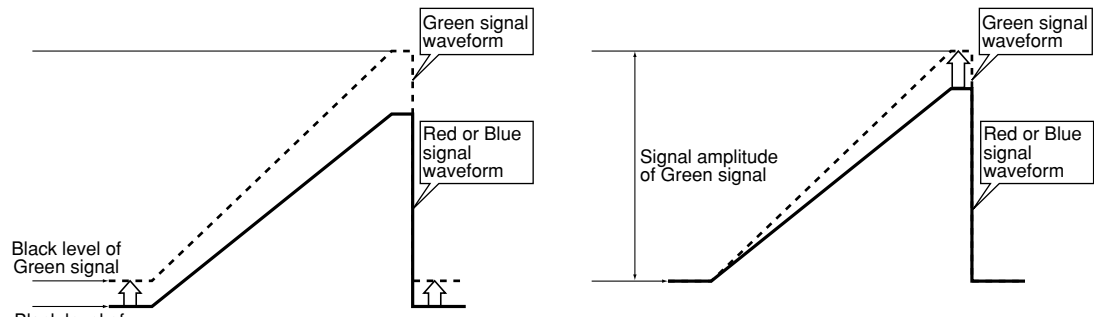
## ■ Mask Level Adjustment

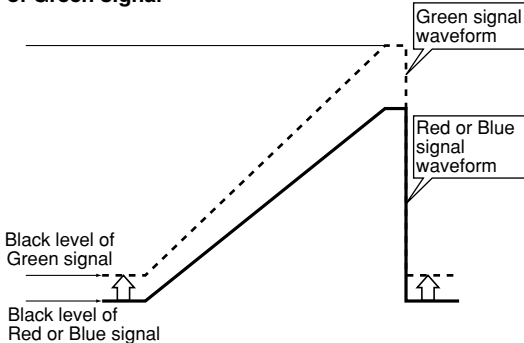
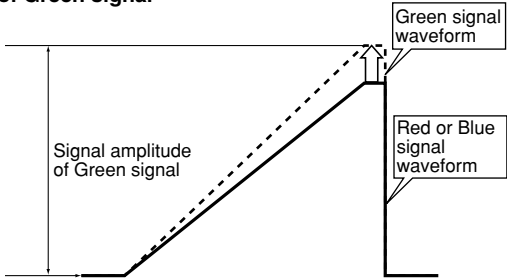
Input Signal	Adjusting Point	Adjusting Method
	VIDEO OPTION mode in Factory mode SIDE MASK LEV. R SIDE LEVEL : key 1 G SIDE LEVEL : key 2 B SIDE LEVEL : key 3	<b>Side mask color / Level Adjustment</b> Set the indicated value with the keys on the remote control unit.

## ■ White Balance Adjustment

- Video Card (PDA-5002 equivalency) is necessary for white balance adjustment for Video signal of RGB Assy.
- Adjust with Video system signal (525i) and RGB (PC VGA) signal.
- Adjust so that the Red and Blue signals becomes the same level and amplitude by reference with Green signal.

Input Signal	Step	Adjusting Method
Video signal	1	Connect a Video card in RGB Assy through a jig cable, and set it in the state that RGB Assy can measure. (Refer to page 133 "Diagnosis of the Video Card (PDA-5002)".) Cannot measure the signal level that does not use a jig cable. Note: Be careful in the direction of connector of a jig cable.
	2	Input a 525i signal to INPUT1 or INPUT2 with a component signal. A signal pattern is only luminance signal such as lamp signal and a STEP signal. And use the signal which black level (0IRE) and gradation can confirm. Note: May use a standard NTSC Video signal as Y (luminance) signal of component signal.
	3	In the signal input function (INPUT1 or INPUT2), perform the display mode of VIDEO signal to component. MENU → SETUP → VIDEO SIGNAL : COMPONENT
	4	Turn to standby once, and perform power supply ON with the factory mode once again. MENU → SET → POWER ON
	5	<b>Turn ACL SW setting to OFF.</b> INITIALIZE mode ACL SW : 3 key Select OFF by right and left keys.
	6	<b>Decrease three steps of MAT CONT adjustment value of OFFSET-RGB1.</b> OFFSET mode: Select the RGB 1 mode by top and bottom keys MAT CONT : 1 key Decrease three steps of adjustment value by right and left keys.
	7	<b>Decrease two steps of MAT BRIGHT adjustment value of OFFSET-RGB1.</b> OFFSET mode: Select the RGB 1 mode by top and bottom keys MAT BRIGHT : 2 key Decrease two steps of adjustment value by right and left keys.
	8	Take a trigger of oscilloscope with HD_PLL (3.3Vp-p) of K4805.
	9	Measure a signal waveform of Green signal at K4603, and measure the black level (0IRE) of signal and signal amplitude.
	10	<b>AD R LOW adjustment</b> Measure the black level (0IRE) of Red signal at K4602, and adjust so that the level of AD R LOW to match the black level (0IRE) of Green signal which measured with step 10. Adjustment error: $\pm 0.05V$ OFFSET mode: Select the RGB 1 mode by top and bottom keys AD R LOW : 9 key Adjust by right and left keys.
	11	<b>AD R HIGH adjustment</b> Measure the signal amplitude of Red signal at K4602, and adjust so that the level of AD R HIGH to match the signal amplitude of Green signal which measured with step 10. Adjustment error: $\pm 0.05V$ OFFSET mode: Select the RGB 1 mode by top and bottom keys AD R HIGH : 6 key Adjust by right and left keys.
	12	<b>AD B LOW adjustment</b> Measure the black level (0IRE) of Blue signal at K4604, and adjust so that the level of AD B LOW to match the black level (0IRE) of Green signal which measured with step 10. Adjustment error: $\pm 0.05V$ OFFSET mode: Select the RGB 1 mode by top and bottom keys AD B LOW : 11 key Adjust by right and left keys.
	13	<b>AD B HIGH adjustment</b> Measure the signal amplitude of Blue signal at K4604, and adjust so that the level of AD B HIGH to match the signal amplitude of Green signal which measured with step 10. Adjustment error: $\pm 0.05V$ OFFSET mode: Select the RGB 1 mode by top and bottom keys AD B HIGH : 8 key Adjust by right and left keys.

Input Signal	Step	Adjusting Method
Video signal		<ul style="list-style-type: none"> <li>● Adjust the black level of Red and Blue signals to reference with black level of Green signal</li> <li>● Adjust the signal amplitude of Red and Blue signals to reference with signal amplitude of Green signal</li> </ul> 
	14	<b>Increase three steps of MAT CONT adjustment value of OFFSET-RGB1.</b> OFFSET mode: Select the RGB 1 mode by top and bottom keys MAT CONT : 1 key Increase three steps of adjustment value by right and left keys.
	15	<b>Increase two steps of MAT BRIGHT adjustment value of OFFSET-RGB1.</b> OFFSET mode: Select the RGB 1 mode by top and bottom keys MAT BRIGHT : 2 key Increase two steps of adjustment value by right and left keys.
	16	<b>Turn ACL SW setting to ON.</b> INITIALIZE mode ACL SW : 3 key Select ON by right and left keys.
RGB (PC) signal	1	Input a RGB (PC) signal to INPUT1 or INPUT2. A signal pattern is only luminance signal such as lamp signal and a STEP signal. And use the signal which black level (0IRE) and gradation can confirm. • Recommended signal: VESA VGA@60Hz
	2	Turn to standby once, and perform power supply ON with the factory mode once again. MENU → SET → POWER ON
	3	Take a trigger of oscilloscope with HD_PLL (3.3Vp-p) of K4805.
	4	Measure the signal waveform of Green signal at K4603, and measure the black level (0IRE) of signal and signal amplitude.
	5	<b>AD R LOW adjustment</b> Measure the black level (0IRE) of Red signal at K4602, and adjust so that the level of AD R LOW to match the black level (0IRE) of Green signal which measured with step 10 of video signal. Adjustment error: $\pm 0.05V$ OFFSET mode: Select the RGB 1 mode by top and bottom keys AD R LOW : 9 key Adjust by right and left keys.
	6	<b>AD R HIGH adjustment</b> Measure the signal amplitude of Red signal at K4602, and adjust so that the level of AD R HIGH to match the signal amplitude of Green signal which measured with step 10 of video signal. Adjustment error: $\pm 0.05V$ OFFSET mode: Select the RGB 1 mode by top and bottom keys AD R HIGH : 6 key Adjust by right and left keys.

Input Signal	Step	Adjusting Method
RGB (PC) signal	7	<b>AD B LOW adjustment</b> Measure the black level (0IRE) of Blue signal at K4604, and adjust so that the level of AD B LOW to match the black level (0IRE) of Green signal which measured with step 10 of video signal. Adjustment error: $\pm 0.05V$ OFFSET mode: Select the RGB 1 mode by top and bottom keys AD B LOW : 11 key Adjust by right and left keys.
	8	<b>AD B HIGH adjustment</b> Measure the signal amplitude of Blue signal at K4604, and adjust so that the level of AD B HIGH to match the signal amplitude of Green signal which measured with step 10 of video signal. Adjustment error: $\pm 0.05V$ OFFSET mode: Select the RGB 1 mode by top and bottom keys AD R LOW : 8 key Adjust by right and left keys.
		<div> <p>● Adjust the black level of Red and Blue signals to reference with black level of Green signal</p>  </div> <div> <p>● Adjust the signal amplitude of Red and Blue signals to reference with signal amplitude of Green signal</p>  </div>

## ■ Color Balance Adjustment

Input Signal	Adjusting Point	Adjusting Method																																											
Fresh color	REFERENCE1 mode in Factory mode COLOR : key 3 TINT : key 4	<p><b>Color Balance Adjustment</b></p> <p>After adjusting the white balance, check the flesh color of figures in LD still pictures. If the color is not natural, adjust it with the keys on the remote control unit.</p> <p>Reference : Adjustment values using the Media color-difference meter (A-100)</p> <table><tr><th></th><th></th><th></th><th>NTSC</th><th>HD</th><th>PC</th></tr><tr><td rowspan="6">White Balance</td><td rowspan="3">20% window-step signal (-3dB)</td><td>x</td><td>298</td><td>299</td><td>302</td></tr><tr><td>y</td><td>307</td><td>315</td><td>308</td></tr><tr><td>Y</td><td>6.6</td><td>5.7</td><td>2.9</td></tr><tr><td rowspan="3">80% window-step signal (-3dB)</td><td>x</td><td>293</td><td>292</td><td>297</td></tr><tr><td>y</td><td>309</td><td>312</td><td>319</td></tr><tr><td>Y</td><td>135</td><td>148</td><td>66.2</td></tr><tr><td rowspan="2">Flesh Color</td><td rowspan="2">Window chroma signal</td><td>x</td><td>430</td><td>427</td><td>—</td></tr><tr><td>y</td><td>365</td><td>362</td><td>—</td></tr></table>				NTSC	HD	PC	White Balance	20% window-step signal (-3dB)	x	298	299	302	y	307	315	308	Y	6.6	5.7	2.9	80% window-step signal (-3dB)	x	293	292	297	y	309	312	319	Y	135	148	66.2	Flesh Color	Window chroma signal	x	430	427	—	y	365	362	—
			NTSC	HD	PC																																								
White Balance	20% window-step signal (-3dB)	x	298	299	302																																								
		y	307	315	308																																								
		Y	6.6	5.7	2.9																																								
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		Y	135	148	66.2																																								
Flesh Color	Window chroma signal	x	430	427	—																																								
		y	365	362	—																																								

## ■ Timing Adjustment of X and Y DRIVE Assys Control Signal

### ● Purpose

- Pulse module loads in DRIVE Assy as one of heat measures of DRIVE Assy. Adjust the drive timing of the pulse module driving parallel with VR.
- Pulse module has each peculiar delay time. Readjustment is necessary when replaced the pulse module in the X and Y DRIVE Assys.

### ● Adjustment Method

CR delay circuit is each inserted on signal path of four control signals (SUS-U, SUS-B, SUS-D, SUS-G) driving the pulse module.

Quantity of delay can adjust pulse module of one side with VR.

Adjust VR while measuring a waveform of the pulse module, and match a timing.

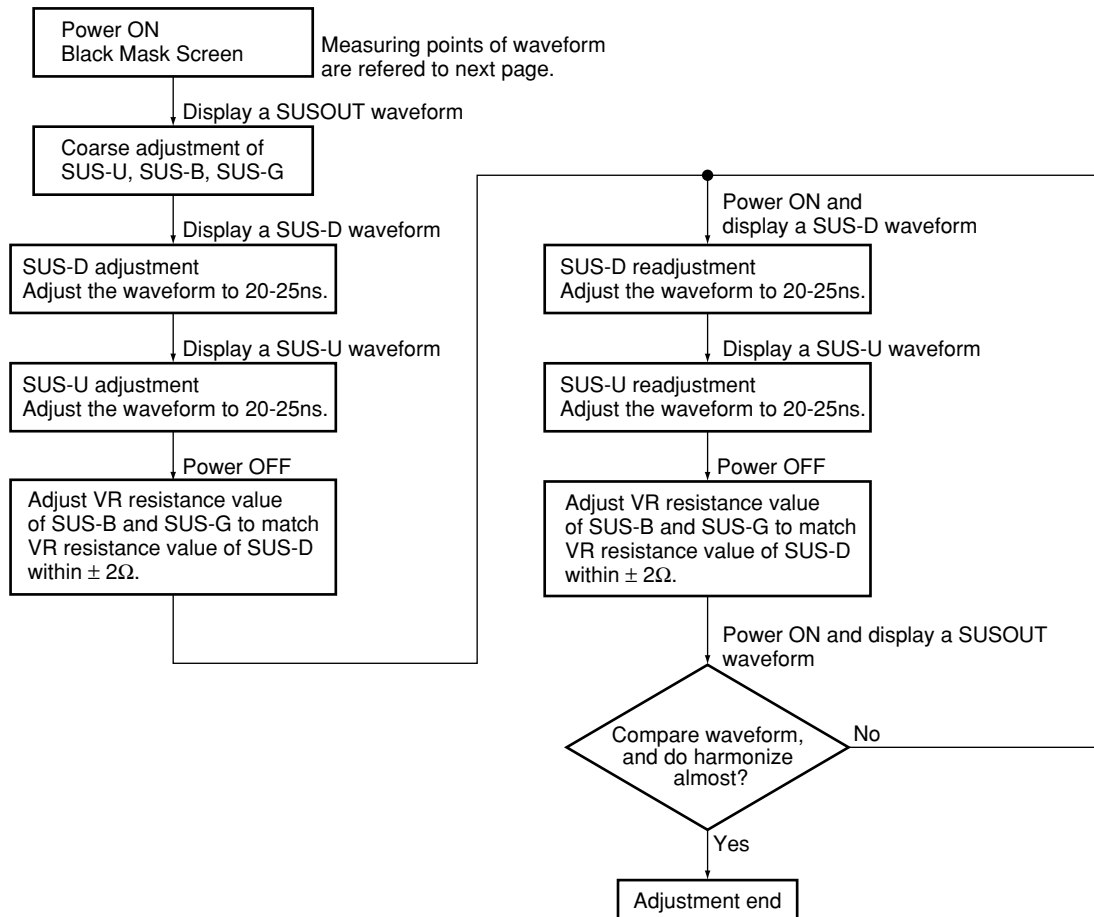
**Adjustment VR**

	X DRIVE	Y DRIVE
SUS-U	VR3203	VR2204
SUS-D	VR3202	VR2203
SUS-B	VR3201	VR2202
SUS-G	VR3200	VR2201

**Test pin for adjustment and measurement**

Pulse Module	X DRIVE		Y DRIVE	
	Upper	Lower	Upper	Lower
SUSOUT	K3105	K3106	K2212	K2203
SUS-U	K3200	K3204	K2220	K2224
SUS-D	K3108	K3205	K2207	K2225

### ● Adjustment Procedure



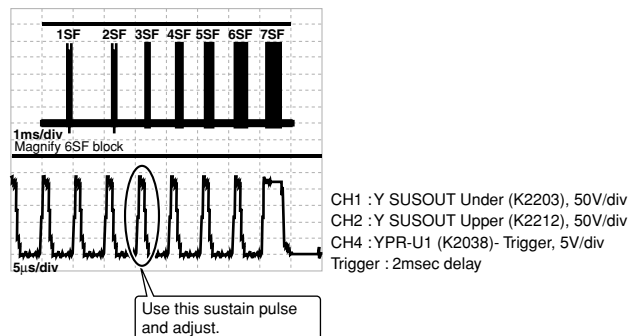
As for this adjustment, adjustment with set state is difficult.  
Therefore replace it every Assy when replacing the pulse module.

## Measuring Waveform of Pulse Module Timing Adjustment

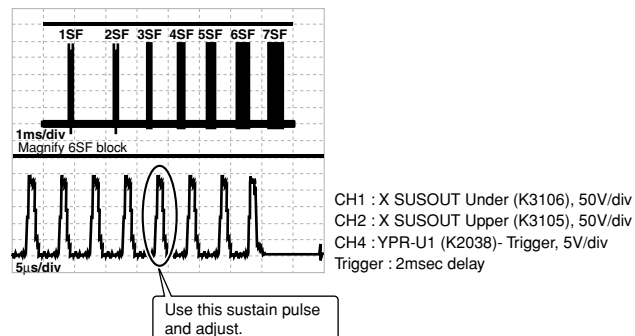
Timing adjustment of the pulse module control signal adjusts with the sustain pulse of eighth pulse (X DRIVE) and the ninth pulse (Y DRIVE) from the back of 6SF.

### Measuring point of waveform

#### Y DRIVE SUSOUT waveform



#### X DRIVE SUSOUT waveform



- Perform adjustment of waveform with a black mask screen.
- It is easy to adjust when turned field AB offset to OFF (RS-232C command: OCN) in adjustment.

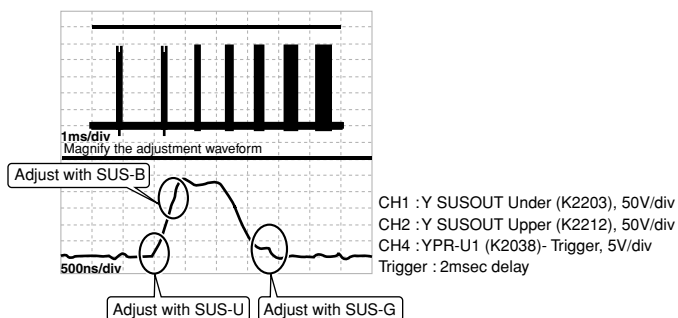
#### Note:

- Sampling rate of oscilloscope sets it more than 500MS/s in order to perform ns order adjustment.
- Collecting calibration of probe before adjustment by all means.
- Connect GND of probe measuring waveform to SUSGND terminal by all means.
- Precise waveform is not displayed, and an adjustment gap may occur that does not collect GND properly.

When took waveform be each drive Assy unit, measure it at the fourth sustain pulse from the back except for a large width sustain pulse. Therefore, when measured both waveform of the X and Y drives together, it becomes the sustain pulse of 8 and 9 pulses from the back.

### Waveform coarse adjustment

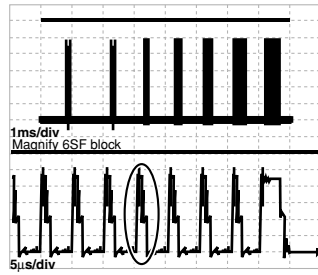
#### Measure the SUSOUT waveform



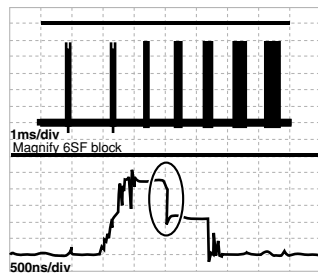
When there is a gap with waveform of CH1 / CH2 of the part which enclosed in the following circle, adjust required VR to overlap the waveform.



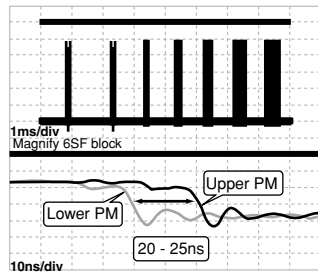
● SUS-D Adjustment (Y DRIVE)



Magnification

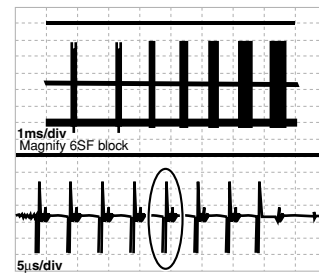


Magnification

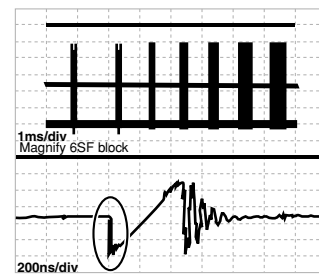


CH1 : Y SUS-D Under (K2225), 50V/div  
CH2 : Y SUS-D Upper (K2207), 50V/div  
CH4 : YPR-U1 (K2038)- Trigger, 5V/div  
Trigger : 2msec delay

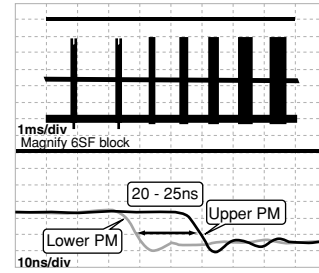
● SUS-U Adjustment (Y DRIVE)



Magnification



Magnification

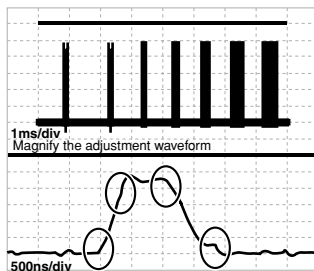


CH1 : Y SUS-U Under (K2224), 50V/div  
CH2 : Y SUS-U Upper (K2220), 50V/div  
CH4 : YPR-U1 (K2038)- Trigger, 5V/div  
Trigger : 2msec delay

**Caution:**  
Not absolutely mistaking upper and lower of waveform.

● Waveform Confirmation in Adjustment completion

Measure the SUSOUT waveform



CH1 : Y SUSOUT Under (K2203), 50V/div  
CH2 : Y SUSOUT Upper (K2212), 50V/div  
CH4 : YPR-U1 (K2038)- Trigger, 5V/div  
Trigger : 2msec delay

Confirm it to waveform of CH1 / CH2 of the part which enclosed in the following circle whether there is not a large gap.  
(A gap of the quantity that shifts 20nS and adjusted remains.)

When adjust in the power supply ON state, change so that the quantity of gap that adjusted by temperature-rise of the pulse module becomes small.  
Therefore, perform high power OFF (RS-232C command: DRF) except measurement time of waveform when adjusts, and adjustment error by temperature-rise does not occur.

## ■ SUS-B Ground Timing Adjustment

It is necessary to readjust this adjustment when replaced the X or Y DRIVE Assy and the pulse module.

### ● Measurement point and method

Measurement point of waveform of X and Y DRIVE Assy in timing adjustment is test pin of SUSOUT of the pulse module of bottom of the main unit.

X DRIVE Assy : K3106 Y DRIVE Assy : K2203

Measurement screen : White mask

The measurement is easy to perform when turns field AB alternation to OFF. (RS-232C command: OCN)

Measure a sustain pulse of the fourth pulse (X DRIVE) and the fifth pulse (Y DRIVE) from the back of the fourth FS, and adjust. In the start section of this sustain pulse, waveform has inflection point with the timing when SUS-B becomes ON. Adjust so that the voltage of this inflection point is the nearest to 150V and do not become less than 150V.

### Adjustment parameter

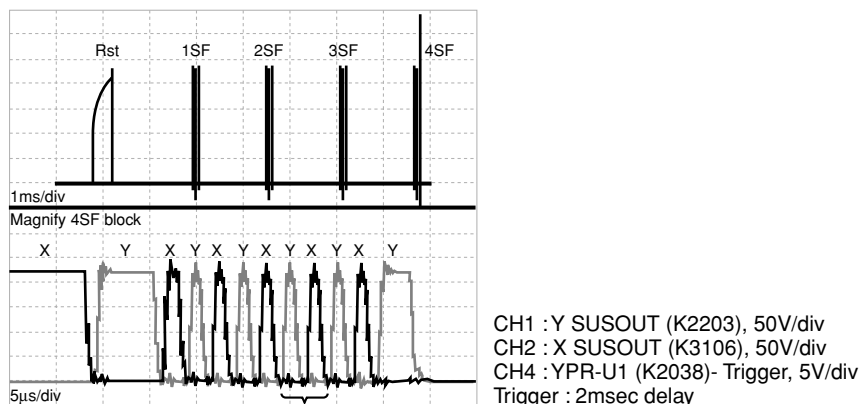
X DRIVE: XSUSB (RS-232C command : XSB)

Y DRIVE: YSUSB (RS-232C command : YSB)

### Note:

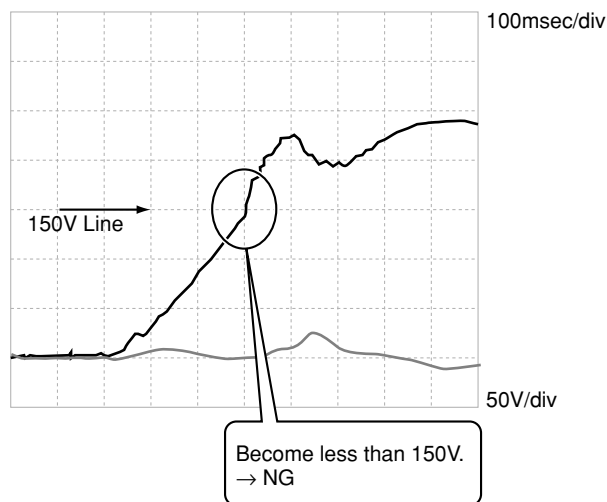
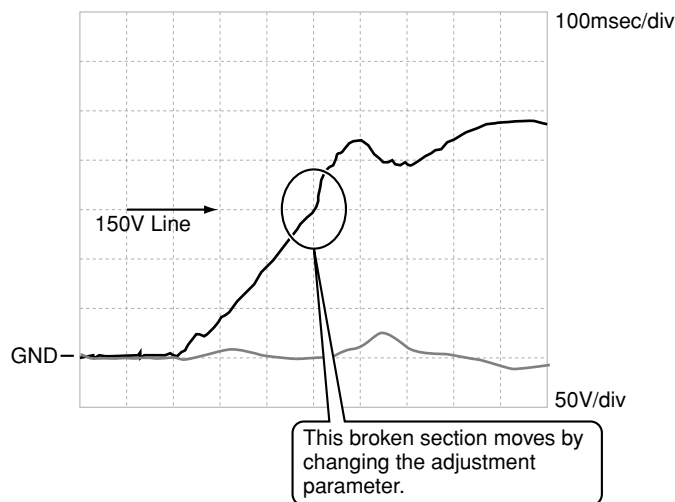
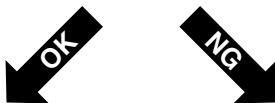
- Connect GND of probe measuring waveform to SUSGND terminal by all means.
- Precise waveform is not displayed, and an adjustment gap may occur that does not collect GND properly.

### ● Waveform in the measurement

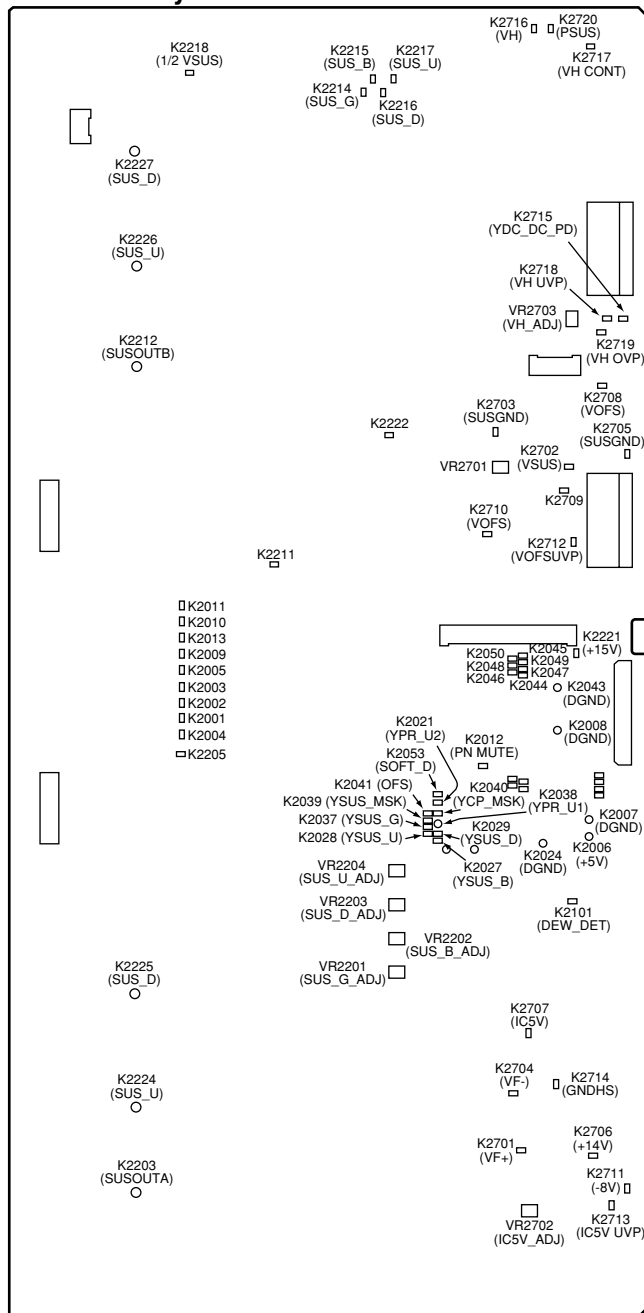


Measure a waveform of this section and adjust.

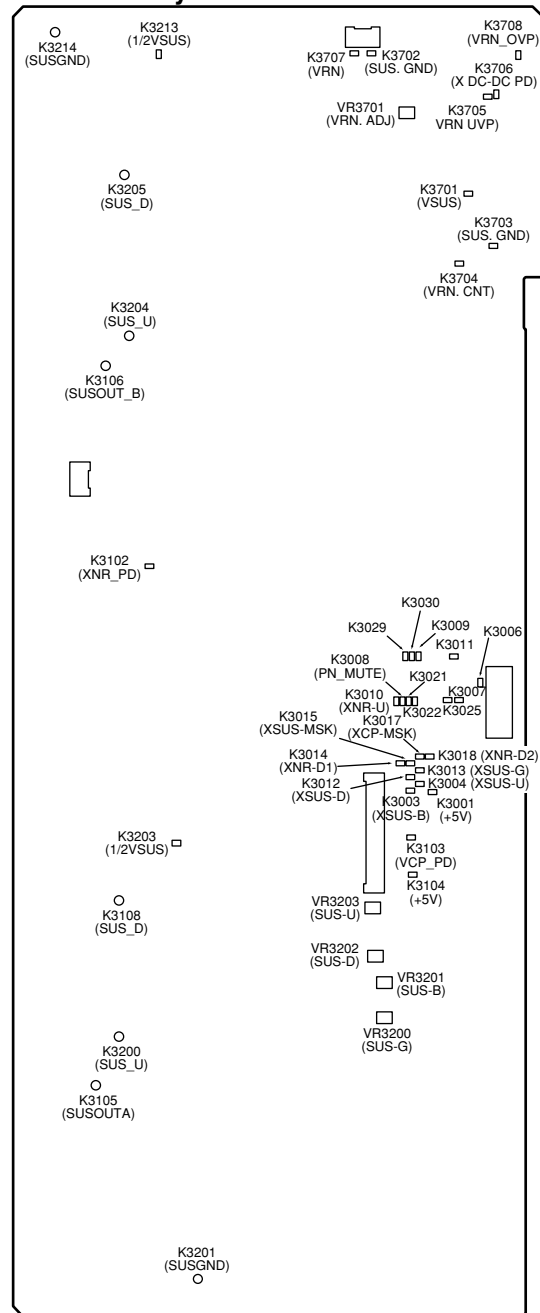
Magnify the fourth pulse sustain pulse (XSUSOUT waveform) from the back of the above waveform.



## Y DRIVE Assy



## X DRIVE Assy



Adjusting Points

## 6.4 COMMAND

### 6.4.1 RS-232C COMMAND (for adjustment)

	Command	Name	Function	RS-232C Factory	RS-232C Integrator	Normal Validity	Direct Validity	UP/DOWN Validity
<b>A</b>	ABL	ABL	ABL level adjustment	O	—	—	O	O
	BRT	BRIGHT	Brightness adjustment	O	O	—	O	O
<b>B</b>	BHI	B HIGH	B HIGH adjustment	O	O	—	O	O
	BLW	B LOW	B LOW adjustment	O	O	—	O	O
	BSL	B SIDE MASK LEVEL	B SIDE MASK LEVEL adjustment	O	O	—	O	O
	BHA	AD B HIGH	AD B HIGH adjustment	O	—	—	O	O
	BLA	AD B LOW	AD B LOW adjustment	O	—	—	O	O
	CNT	CONTRAST	Contrast adjustment	O	O	—	O	O
<b>C</b>	COL	COLOR	Color adjustment	O	O	—	O	O
	CDR	CDR OFFSET	CDR OFFSET adjustment	O	—	—	O	O
	CDB	CDB OFFSET	CDB OFFSET adjustment	O	—	—	O	O
	CTI	CD TINT	Chroma decode TINT adjustment	O	—	—	O	O
	CPH	CLOCK PHASE	PLL phase adjustment	O	O	—	O	O
	CFR	CLOCK FREQUENCY	PLL frequency adjustment	O	O	—	O	O
<b>D</b>	DW0	DOWN 10	Turn the adjustment value to 10 DOWN	O	O	O	—	—
	DWn	DOWN n	Turn the adjustment value to n DOWN (n = 1, 2, • • • 8, 9)	O	O	O	—	—
	DWF	DOWN FULL	Turn the adjustment value to minimum	O	O	O	—	—
<b>G</b>	GHI	G HIGH	G HIGH adjustment	O	O	—	O	O
	GLW	G LOW	G LOW adjustment	O	O	—	O	O
	GSL	G SIDE MASK LEVEL	G SIDE MASK LEVEL adjustment	O	O	—	O	O
	GHA	AD G HIGH	AD G HIGH adjustment	O	—	—	O	O
	GLA	AD G LOW	AD G LOW adjustment	O	—	—	O	O
<b>L</b>	LRY	R-Y LEVEL	R-Y level adjustment	O	—	—	O	O
	LBY	B-Y LEVEL	B-Y level adjustment	O	—	—	O	O
<b>M</b>	MCT	MAT CONTRAST	MAT CONTRAST adjustment	O	—	—	O	O
	MBR	MAT BRIGHT	MAT BRIGHT adjustment	O	—	—	O	O
	MCL	MAT COLOR	MAT COLOR adjustment	O	—	—	O	O
	MTI	MAT TINT	MAT TINT adjustment	O	—	—	O	O
	MCA	AD MAIN CONTRAST	AD MAIN CONTRAST adjustment	O	—	—	O	O
<b>P</b>	PBH	PANEL BLUE HIGH	BLUE HIGH-LIGHT adjustment	O	—	—	O	O
	PBL	PANEL BLUE LOW	BLUE LOW-LIGHT adjustment	O	—	—	O	O
	PGH	PANEL GREEN HIGH	GREEN HIGH-LIGHT adjustment	O	—	—	O	O
	PGL	PANEL GREEN LOW	GREEN LOW-LIGHT adjustment	O	—	—	O	O
	PRH	PANEL RED HIGH	RED HIGH-LIGHT adjustment	O	—	—	O	O
<b>R</b>	PRL	PANEL RED LOW	RED LOW-LIGHT adjustment	O	—	—	O	O
	RHI	R HIGH	R HIGH adjustment	O	O	—	O	O
	RLW	R LOW	R LOW adjustment	O	O	—	O	O
	RSL	R SIDE MASK LEVEL	R SIDE MASK LEVEL adjustment	O	O	—	O	O
	RHA	AD R HIGH	AD R HIGH adjustment	O	—	—	O	O
<b>S</b>	RLA	AD R LOW	AD R LOW adjustment	O	—	—	O	O
	SV1	SUB VOLUME INPUT1	Adjust the sub-volume of INPUT1	O	O	—	O	O
	SV2	SUB VOLUME INPUT2	Adjust the sub-volume of INPUT2	O	O	—	O	O
	SV3	SUB VOLUME INPUT3	Adjust the sub-volume of INPUT3	O	O	—	O	O
	SV4	SUB VOLUME INPUT4	Adjust the sub-volume of INPUT4	O	O	—	O	O
	SV5	SUB VOLUME INPUT5	Adjust the sub-volume of INPUT5	O	O	—	O	O
	SHP	H.SHARP	H.SHARP/H.ENHANCE adjustment	O	O	—	O	O
<b>T</b>	SHV	V.SHARP	V.SHARP/V.ENHANCE adjustment	O	O	—	O	O
	TNT	TINT	TINT adjustment	O	O	—	O	O
<b>U</b>	UP0	UP10	Turn the adjustment value to 10 UP	O	O	O	—	—
	UPn	UPn	Turn the adjustment value to n UP (n = 1, 2, • • • 8, 9)	O	O	O	—	—
	UPF	UP FULL	Turn the adjustment value to maximum	O	O	O	—	—
<b>V</b>	VOF	VOFFSET ADJUST	Vofs adjustment	O	—	—	O	O
	VOL	VOLUME	Audio volume adjustment	O	O	O	O	O
	VSU	VSUS ADJUST	Vsus adjustment	O	—	—	O	O
	VPS	VERTICAL POSITION	Adjust the vertical position	O	O	—	O	O
	VSI	VERTICAL SIZE	Adjust the vertical size	O	O	—	O	O
<b>X</b>	XSB	XSUS B	X-SUS-B pulse adjustment	O	—	—	O	O
	XSG	XSUS G	X-SUS-G pulse adjustment	O	—	—	O	O
<b>Y</b>	YSB	YSUS B	Y-SUS-B pulse adjustment	O	—	—	O	O
	YSG	YSUS G	Y-SUS-G pulse adjustment	O	—	—	O	O
	YDL	Y-DELAY	Y-DELAY adjustment	O	—	—	O	O
	YOL	Y-OUT LEVEL	Y-OUT LEVEL adjustment	O	—	—	O	O

## 6.4.2 RS-232C COMMAND (for setting)

	Command	Name	Function	RS-232C Factory	RS-232C Integrator	Normal Validity	Direct Validity	UP/DOWN Validity
A	AJN	ADJUST NO	Complete the RS-232C integrator mode	—	O	—	—	—
	AJY	ADJUST YES	Start the RS-232C integrator mode	—	—	O	—	—
	AMN	AUDIO MUTE NO	Turn the audio mute to OFF	O	O	O	—	—
	AMY	AUDIO MUTE YES	Turn the audio mute to ON	O	O	O	—	—
	AB0	ABL MODE0	Set the ABL setting to MODE0 (REFERENCE)	O	—	—	—	—
	AB1	ABL MODE1	Set the ABL setting to MODE1 (PC)	O	—	—	—	—
	AB2	ABL MODE2	Set the ABL setting to MODE2 (VIDEO60Hz)	O	—	—	—	—
B	AB3	ABL MODE3	Set the ABL setting to MODE3 (VIDEO50Hz)	O	—	—	—	—
	BBY	VIDEO RGB YES	Set the signal format to VIDEO RGB	O	O	—	—	—
	BR1	BAUD RATE1	Set the RS-232C baud rate to 1200BPS	O	O	—	—	—
	BR2	BAUD RATE2	Set the RS-232C baud rate to 2400BPS	O	O	—	—	—
	BR3	BAUD RATE3	Set the RS-232C baud rate to 4800BPS	O	O	—	—	—
	BR4	BAUD RATE4	Set the RS-232C baud rate to 9600BPS	O	O	—	—	—
	BR5	BAUD RATE5	Set the RS-232C baud rate to 19200BPS	O	O	—	—	—
C	BR6	BAUD RATE6	Set the RS-232C baud rate to 38400BPS	O	O	—	—	—
	CM1	COLOR MODE 1	Set to COLOR MODE 1	O	O	O	—	—
	CM2	COLOR MODE 2	Set to COLOR MODE 2	O	O	O	—	—
	CP1	VIDEO COMPONENT1 YES	Set the signal format to VIDEO COMPONENT1	O	O	—	—	—
	CP2	VIDEO COMPONENT2 YES	Set the signal format to VIDEO COMPONENT2	O	O	—	—	—
	CDE	COLOR DETECT EURO	Set the color detect to EURO	O	O	—	—	—
	CDM	COLOR DETECT ALL	Set the color detect to ALL	O	O	—	—	—
	CDA	COLOR DETECT SA	Set the color detect to SA	O	O	—	—	—
	CT1	COLOR TEMP.1	Set the color temperature to -3000K equivalency	O	O	—	—	—
	CT2	COLOR TEMP.2	Set the color temperature to -2000K equivalency	O	O	—	—	—
	CT3	COLOR TEMP.3	Set the color temperature to $\pm$ 0K equivalency	O	O	—	—	—
	CT4	COLOR TEMP.4	Set the color temperature to +1000K equivalency	O	O	—	—	—
	CT5	COLOR TEMP.5	Set the color temperature to +2000K equivalency	O	O	—	—	—
	CL1	CLAMP MODE1	Set the clamp position to AUTO	O	O	—	—	—
	CL2	CLAMP MODE2	Set the clamp position to fix	O	O	—	—	—
D	DIN	OSD DISPLAY NO	Prohibit OSD display	O	O	O	—	—
	DIY	OSD DISPLAY YES	Permit OSD display	O	O	O	—	—
	DOF	DISPLAY OFF	Turn the OSD display to OFF	O	O	O	—	—
	DRN	DRIVE ON	Turn the drive to ON	It is valid in the RS-232C factory and STB			—	—
	DRF	DRIVE OFF	Turn the drive to OFF				—	—
	DSP	INPUT SIGNAL DISPLAY	Display current input signal information	O	O	—	—	—
	DS2	DISPLAY2	Display current various information	O	O	—	—	—
E	EWY	EEPROM WRITE YES	Start the Plug & Play EEPROM writing mode	O	—	—	—	—
	EWN	EEPROM WRITE NO	Complete the Plug & Play EEPROM writing mode	O	—	—	—	—
F	FAN	FACTORY ADJUST NO	Complete the factory adjustment mode	O	—	—	—	—
	FAY	FACTORY ADJUST YES	Start the factory adjustment mode	—	—	O	—	—
	FST	FINAL SET UP	Turn various setting into the Shipping state	O	—	—	—	—
	FRP	FRESH POSITION	Initialize SCREEN value of integrator	O	O	—	—	—
	FCA	FAN CONTROL AUTO	Turn the fan roll control to AUTO	O	O	—	—	—
	FCM	FAN CONTROL MAX	Turn the fan roll control to MAX	O	O	—	—	—
	FMY	FULL MASK YES	Set to FULL MASK (white)	—	O	—	—	—
	FMR	FULL MASK RED	Set to FULL MASK (red)	—	O	—	—	—
	FMG	FULL MASK GREN	Set to FULL MASK (green)	—	O	—	—	—
	FMB	FULL MASK BLUE	Set to FULL MASK (blue)	—	O	—	—	—
	FMN	FULL MASK NO	Release the FULL MASK	—	O	—	—	—
	FXO	FIX OUTPUT	Set the audio output to fix	O	O	—	—	—
	F50	FREE RUN 50Hz	Set the free-running to 50Hz in the MASK setting	O	—	—	—	—
	F60	FREE RUN 60Hz	Set the free-running to 60Hz in the MASK setting	O	—	—	—	—
	F70	FREE RUN 70Hz	Set the free-running to 70Hz in the MASK setting	O	—	—	—	—
G	GAJ	GET ADJUST	Get a various adjustment value of the display from EEPROM	O	—	—	—	—
	GPW	GET PANEL W/B	Get the panel W/B information from EEPROM	O	—	—	—	—
	GS1	GET STATUS 1	Get the version information of microcomputer from EEPROM	O	—	—	—	—
	GS2	GET STATUS 2	Get the PD information and temperature information from EEPROM	O	—	—	—	—
	GPS	GET POSITION DATA	TxD outputs the positioning data	O	O	O	—	—
	GSO	GET STATUS OPTION	TxD outputs data of various established state (OPTION)	O	O	O	—	—
	GSS	GET STATUS SET UP	TxD outputs data of various established state (SET UP)	O	O	O	—	—
	GAS	GET ADJUST SLOT	TxD outputs data of picture quality setting of SLOT	O	—	—	—	—
	GAR	GET ADJUST RGB	TxD outputs data of picture quality adjustment (RGB 1)	O	—	—	—	—

# PDP-503CMX, PDP-503MXE, PDA-5002

	Command	Name	Function	RS-232C Factory	RS-232C Integrator	Normal Validity	Direct Validity	UP/DOWN Validity
G	GWB	GET WHITE BALANCE	TxD outputs data of picture quality setting of RGB1	0	0	0	—	—
	GPD	GET POWER DOWN	TxD outputs POWER DOWN information	0	—	—	—	—
H	HCN	HIGH CONTRAST NO	Turn the high contrast setting to OFF	0	0	—	—	—
	HCY	HIGH CONTRAST YES	Turn the high contrast setting to ON	0	0	—	—	—
	HMS	HOURLY METER SET	Set the hour meter to optional time	0	—	—	0	—
	HMD	HOURLY METER DISP.	Display the hour meter	0	0	—	—	—
	H80	HDTV MODE 1080 i	Set the HDTV mode to 1080 i	0	0	—	—	—
	H35	HDTV MODE 1035 i	Set the HDTV mode to 1035 i	0	0	—	—	—
	H35	HDTV MODE 1035 i	Set the HDTV mode to 1035 i	0	0	—	—	—
I	IN1	INPUT1	Selects INPUT1	0	0	0	—	—
	IN2	INPUT2	Selects INPUT2	0	0	0	—	—
	IN3	INPUT3	Selects INPUT3	0	0	0	—	—
	IN4	INPUT4	Selects INPUT4	0	0	0	—	—
	IN5	INPUT5	Selects INPUT5	0	0	0	—	—
	IMN	INTEGRATOR MODE NO	Set the integrator mode to LOCK	0	—	—	—	—
	IMY	INTEGRATOR MODE YES	Set the integrator mode to UNLOCK	0	—	—	—	—
	IDC	ID CLEAR	Clear the ID	0	0	—	—	—
	IDS	ID SET	Set the ID	0	0	—	0	—
	IDS	ID SET	Set the ID	0	0	—	0	—
K	KLN	KEY LOCK NO	Permit main unit key / remote control unit operation	0	0	—	—	—
	KLY	KEY LOCK YES	Prohibit main unit key / remote control unit operation	0	0	—	—	—
M	M00	MASK 00	Mask mode OFF	0	—	—	—	—
	M01	MASK 01	Pattern 1 (ramp)	0	—	—	—	—
	M02	MASK 02	Pattern 2 (color bar)	0	—	—	—	—
	M03	MASK 03	Pattern 3 (slanting line)	0	—	—	—	—
	M04	MASK 04	Pattern 4 (for W/B measurement)	0	—	—	—	—
	M05	MASK 05	Pattern 5 (for W/B adjustment)	0	—	—	—	—
	M06	MASK 06	Pattern 6 (for W/B peak measurement)	0	—	—	—	—
	M07	MASK 07	Pattern 7 (for peak measurement)	0	—	—	—	—
	M08	MASK 08	Pattern 8 (reservation)	0	—	—	—	—
	M09	MASK 09	Pattern 9 (for SCAN IC protect test)	0	—	—	—	—
	M10	MASK 10	Pattern 10 (for SCAN IC protect test)	0	—	—	—	—
	M11	MASK 11	Pattern 11 (reservation)	0	—	—	—	—
	M12	MASK 12	Pattern 12 (reservation)	0	—	—	—	—
	M13	MASK 13	Pattern 13 (reservation)	0	—	—	—	—
	M14	MASK 14	Pattern 14 (reservation)	0	—	—	—	—
	M51	MASK 51	Full mask (white)	0	—	—	—	—
	M52	MASK 52	Full mask (cyan 274)	0	—	—	—	—
	M53	MASK 53	Full mask (magenta 274)	0	—	—	—	—
	M54	MASK 54	Full mask (fresh color)	0	—	—	—	—
	M55	MASK 55	Full mask (cyan 1023)	0	—	—	—	—
	M56	MASK 56	Full mask (light purple 5)	0	—	—	—	—
	M57	MASK 57	Full mask (sky blue)	0	—	—	—	—
	M58	MASK 58	Full mask (red)	0	—	—	—	—
	M59	MASK 59	Full mask (green)	0	—	—	—	—
	M60	MASK 60	Full mask (blue)	0	—	—	—	—
	M61	MASK 61	Full mask (black)	0	—	—	—	—
	M62	MASK 62	Full mask (reservation)	0	—	—	—	—
	M63	MASK 63	Full mask (reservation)	0	—	—	—	—
	M64	MASK 64	Full mask (reservation)	0	—	—	—	—
	M65	MASK 65	Full mask (reservation)	0	—	—	—	—
	M66	MASK 66	Full mask (reservation)	0	—	—	—	—
	MG1	2X2MODE LEFT UPPER	Four enlarged setting: Upper left	0	0	—	—	—
	MG2	2X2MODE LEFT LOWER	Four enlarged setting: Lower left	0	0	—	—	—
	MG3	2X2MODE RIGHT UPPER	Four enlarged setting: Upper right	0	0	—	—	—
	MG4	2X2MODE RIGHT LOWER	Four enlarged setting: Lower right	0	0	—	—	—
	MGY	2X2MODE YES	Turn the four sides multi to ON	0	0	0	—	—
	MGN	2X2MODE NO	Turn the four sides multi to OFF	0	0	0	—	—
	MMN	MIRROR MODE NO	Turn the mirror mode to OFF (normal display)	0	0	0	—	—
	MMX	MIRROR MODE X	Right and left reversing display	0	0	0	—	—
	MMY	MIRROR MODE Y	Top and bottom reversing display	0	0	0	—	—
	MMZ	MIRROR MODE XY	Top and bottom / right and left reversing display	0	0	0	—	—
	MTN	VIDEO MUTE NO	Turn the video mute of IC30 to OFF	0	0	0	—	—
	MTY	VIDEO MUTE YES	Turn the video mute of IC30 to ON	0	0	0	—	—

	Command	Name	Function	RS-232C Factory	RS-232C Integrator	Normal Validity	Direct Validity	UP/DOWN Validity
<b>M</b>	MCY	MASK CONTROL YES	Permit automatic mask display position setting	0	0	—	—	—
	MCN	MASK CONTROL NO	Release automatic mask display position setting	0	0	—	—	—
<b>N</b>	NMY	NEGATIVE MODE YES	Turn the inverse mode (negative positive inverting) to ON	0	0	—	—	—
	NMN	NEGATIVE MODE NO	Turn the inverse mode (negative positive inverting) to OFF	0	0	—	—	—
	NTS	COLOR SYSTEM NTSC	Turn the COLOR SYSTEM setting to NTSC	0	0	—	—	—
	NT4	COLOR SYSTEM 4.43NTSC	Turn the COLOR SYSTEM setting to 4.43NTSC	0	0	—	—	—
	NRN	DIGITAL NR OFF	Turn the DIGITAL NR setting to OFF	0	0	—	—	—
	NRL	DIGITAL NR LOW	Turn the DIGITAL NR setting to LOW	0	0	—	—	—
	NRM	DIGITAL NR MIDDLE	Turn the DIGITAL NR setting to MIDDLE	0	0	—	—	—
	NRH	DIGITAL NR HIGH	Turn the DIGITAL NR setting to HIGH	0	0	—	—	—
<b>O</b>	OFY	OFFSET YES	Turn the OFFSET adjustment mode to ON	0	—	—	—	—
	OCY	FIELD OFFSET CHANGE YES	Turn the field AB offset to ON	0	—	—	—	—
	OCN	FIELD OFFSET CHANGE NO	Turn the field AB offset to OFF	0	—	—	—	—
	OMY	ORBITER MODE YES	Turn the orbiter mode to ON	0	0	—	—	—
	OMN	ORBITER MODE NO	Turn the orbiter mode to OFF	0	0	—	—	—
<b>P</b>	PAF	ACL SW OFF	Turn the ACL SW to OFF	0	—	—	—	—
	PAL	COLOR SYSTEM PAL	Turn the COLOR SYSTEM setting to PAL	0	0	—	—	—
	PAN	ACL SW ON	Turn the ACL SW to ON	0	—	—	—	—
	PCY	PC RGB YES	Turn the INPUT setting to PC: RGB (VGA or XGA)	0	0	—	—	—
	PWY	PC WIDE YES	Turn the INPUT setting to PC: RGB (WVGA or WXGA)	0	0	—	—	—
	PLN	BRIGHT ENHANCE OFF	Turn the center brightness correction function to OFF	0	0	—	—	—
	PLY	BRIGHT ENHANCE ON	Turn the center brightness correction function to ON	0	0	—	—	—
	PMS	PULSE METER SET	Set the pulse meter	0	—	—	0	—
	PMD	PULSE METER DISP	Display the pulse meter	0	—	—	—	—
	PMY	COLOR SYSTEM PAL-M	Turn the COLOR SYSTEM setting to PAL-M	0	0	—	—	—
	PNY	COLOR SYSTEM PAL-N	Turn the COLOR SYSTEM setting to PAL-N	0	0	—	—	—
	PON	POWER ON	Power ON	—	—	0	—	—
	POF	POWER OFF	Power OFF	0	0	0	—	—
	PT0	PANEL COLOR TEMP0	Panel color temperature 0 (REFERENCE value)	0	—	—	—	—
	PT1	PANEL COLOR TEMP1	Panel color temperature 1	0	—	—	—	—
	PT2	PANEL COLOR TEMP2	Panel color temperature 2	0	—	—	—	—
	PSN	AUTO POWER OFF OFF POWER MANAGEMENT OFF	Turn the AUTO POWER OFF / POWER MANAGEMENT setting to OFF	0	0	—	—	—
	PS1	AUTO POWER OFF ON	Turn the AUTO POWER OFF setting to ON	0	0	—	—	—
	PS2	POWER MANAGEMENT ON	Turn the POWER MANAGEMENT setting to ON	0	0	—	—	—
	PUN	PURECINEMA OFF	Turn the PURECINEMA to OFF	0	0	—	—	—
	PUS	PURECINEMA STANDARD	Turn the PURECINEMA to STANDARD	0	0	—	—	—
	PUH	PURECINEMA HQ	Turn the PURECINEMA to HQ (HIGH QUALITY)	0	0	—	—	—
	PWN	POWER CONTROL STANDARD	Turn the power control to OFF (STANDARD mode)	0	0	—	—	—
	PWL	CONTROL MODE1	Turn the power control to MODE1 (Power-saving mode)	0	0	—	—	—
	PWS	POWER CONTROL MODE2	Turn the power control to MODE2 (Longevity life mode)	0	0	—	—	—
	PDF	PICTURE DEFAULT	Execute PICTURE DEFAULT	0	—	—	—	—
<b>R</b>	RFY	REFERENCE YES	Start the reference adjustment mode	0	—	—	—	—
<b>S</b>	SCM	COLOR SYSTEM SECAM	Turn the COLOR SYSTEM setting to SECAM	0	0	—	—	—
	STD	STANDARD W/B	Return the PIC and W/B of integrator to factory default value	—	0	—	—	—
	SM0	SCREEN MODE 0	Turn the screen size to DOT BY DOT	0	0	0	—	—
	SM1	SCREEN MODE 1	Turn the screen size to 4:3	0	0	0	—	—
	SM2	SCREEN MODE 2	Turn the screen size to FULL	0	0	0	—	—
	SM3	SCREEN MODE 3	Turn the screen size to ZOOM	0	0	0	—	—
	SM5	SCREEN MODE 5	Turn the screen size to WIDE	0	0	0	—	—
	SLY	STILL YES	Turn the STILL setting to ON	0	0	0	—	—
	SLN	STILL NO	Turn the STILL setting to OFF	0	0	0	—	—
<b>T</b>	TVA	COLOR SYSTEM AUTO	Turn the COLOR SYSTEM setting to AUTO	0	0	—	—	—
<b>V</b>	VFY	VIDEO FULL DISPLAY YES	Start 100% display	—	—	0	—	—
	VFN	VIDEO FULL DISPLAY NO	Complete 100% display	—	—	0	—	—
	VRO	VARIABLE OUTPUT	Turn the audio output to variable	0	0	—	—	—
<b>Y</b>	YCM	3S Y/C MOTION	Turn the 3D Y/C setting to MOTION	0	0	—	—	—
	YCS	3D Y/C STILL	Turn the 3D Y/C setting to STILL	0	0	—	—	—

## 6.4.3 GET Command

### ● Command Description

Command	Function
GAJ	Output data of an electronic VR adjustment value and a drive system adjustment value
GPW	Output data to be related to white balance adjustment of the panel
GS1	Output data such as version information, hour meter and pulse meter
GS2	Output data of power down, temperature and dew drop information
GAS	Output data to be related to picture quality setting of SLOT
GAR	Output data to be related to picture quality (RGB1 of the factory menu)
GPD	Output POWER DOWN information (past eight times)
GPS	Output a SCREEN parameter
GWB	Output a parameter of PICTURE and WHITE BALANCE
GSS	Output various setting of the SET UP item of menu mode / integrator mode
GSO	Output various setting of the OPTION item of menu mode / integrator mode

### GAJ: Output data of an electron VR adjustment value and a drive system adjustment value

- Output it according to transmission order and size of the table below.
- Command is invalid except RS-232C factory adjustment mode.

Order	Data Contents	Size	Remarks
1	Setting mode of electric power upper limit value	3 byte	AB* ( *: 0 to 3)
2	Electric power upper limit value (ABL)	(Reference data)	3 byte
3		(Offset data)	3 byte (Note 1)
4	Vsus adjustment value	(Reference data)	3 byte
5	Vofs adjustment value	(Reference data)	3 byte
6	V-SUS-B adjustment value	(Reference data)	3 byte
7	V-SUS-G adjustment value	(Reference data)	3 byte
8	Y-SUS-B adjustment value	(Reference data)	3 byte
9	Y-SUS-G adjustment value	(Reference data)	3 byte

(Note 1) : When performed in reference mode selection, offset data outputs the same value as the reference data.

### GPW (Get Panel White balance): Output data to be related to white balance adjustment of panel

- Output it according to transmission order and size of the table below.
- Command is invalid except RS-232C factory adjustment mode.

Order	Data Contents	Size	Remarks
1	Panel color temperature mode	3 byte	PT* ( *: 0 to 3)
2	Gain of W/B adjustment value Red	(Reference data)	3 byte
3		(Offset data)	3 byte (Note 1)
4	Gain of W/B adjustment value Green	(Reference data)	3 byte
5		(Offset data)	3 byte (Note 1)
6	Gain of W/B adjustment value Blue	(Reference data)	3 byte
7		(Offset data)	3 byte (Note 1)
8	Offset of W/B adjustment value Red	(Reference data)	3 byte
9		(Offset data)	3 byte (Note 1)
10	Offset of W/B adjustment value Green	(Reference data)	3 byte
11		(Offset data)	3 byte (Note 1)
12	Offset of W/B adjustment value Blue	(Reference data)	3 byte
13		(Offset data)	3 byte (Note 1)

(Note 1) : When performed in reference mode selection, offset data outputs the same value as the reference data.



**GS1: Output data such as version information, hour meter and pulse meter**

- Output it according to transmission order and size of the table below.
- Command is invalid except RS-232C factory adjustment mode.

Order	Data Contents	Size	Remarks
1	Display information	3 byte	See below
2	Module microcomputer model number	4 byte	5691 or F691
3	Module microcomputer version	3 byte	
4	Panel microcomputer version	3 byte	
5	Panel /FLASH ROM version	3 byte	
6	Hour meter (hour)	5 byte	Unit: H (time)
7	Pulse meter	7 byte	Unit: 0.01G (10,000,000)
8	Main microcomputer model number	4 byte	5692 or F692
9	Main microcomputer version	3 byte	
10	Wide microcomputer version	3 byte	
11	Wide /FLASH ROM version	3 byte	

**■ Display Information**

Data	Model
MX5	PDP-503MX (initial value)
MX4	PDP-433MX
MD5	Module 50 inches
MD4	Module 43 inches
HD5	PDP-503HD
HD4	PDP-433HD

**GS2: Output data of power down, temperature and dew drop information**

- Output it according to transmission order and size of the table below.
- In the PD (Power Down) of RS-232C factory adjustment mode, NG except dew drop and AUDIO occurs and a command that except for 30 seconds to SD (shut down) is invalid.

**Note:** When NG occurred in the PD state, do not perform the "FAY" for 30 seconds to SD (Shut Down), and information acquisition is possible by perform the "GS2" directly. However it is necessary to set ID beforehand.

Order	Data Contents	Size	Remarks
1	AC information	1 byte	Always 0 (not used)
2	Service parts distinction	1 byte	0: DIGITAL ASSY adjustment completion 1: DIGITAL ASSY does not adjust (Service Assy)
3	Hour meter (hour, minute)	7 byte	*****H**M
4	Power down information	2 byte	1st/2nd (Note)
5	Temperature information	3 byte	8 bit
6	Dew drop information	1 byte	1: Dew drop NG
7	Panel microcomputer communication	1 byte	1: Communication NG
8	DIGITAL EEPROM communication	1 byte	1: Communication NG
9	DIGITAL EXPANDER communication	1 byte	1: Communication NG
10	Temperature information (TEMP2)	3 byte	8 bit
11	Temperature information (TEMP3)	3 byte	8 bit
12	Module microcomputer communication	1 byte	1: Communication NG
13	Wide microcomputer communication	1 byte	1: Communication NG
14	MAIN IIC	1 byte	1: Communication NG
15	MAIN EEPROM IIC	1 byte	1: Communication NG
16	AUDIO NG	1 byte	1: AUDIO NG
17	FAN NG	1 byte	1: FAN NG

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(Note) Refer to the following table about contents of PD information

Data	Power Down Point
0	Nothing
1	Y-DRIVE
2	Y-DC/DC CONVERTER
3	X-DC/DC CONVERTER
4	X-DRIVE
5	Power supply
6	ADDRESS junction
7	ADDRESS resonance
8	DC/DC CONVERTER (DIGITAL)

## GAS (Get Adjust Slot): Output data to be related to picture quality setting

- Transmit data according to transmission order and size of the table below.
- Data are SLOT sections of the factory menu.
- When current input function is except for VIDEO input of SLOT system, command is invalid.
- When SLOT is not connected or external SLOT is connected, command is invalid.
- Command is invalid except RS-232C factory adjustment mode.

Order	Data Contents		Size	Remarks
1	Y-DELAY	(Reference data)	3 byte	
2		(Offset data)	3 byte	(Note 1)
3	Y-OUT LEVEL	(Reference data)	3 byte	
4		(Offset data)	3 byte	(Note 1)
5	CD TINT	(Reference data)	3 byte	
6		(Offset data)	3 byte	(Note 1)
7	CDR OFFSET	(Reference data)	3 byte	
8		(Offset data)	3 byte	(Note 1)
9	CDB OFFSET	(Reference data)	3 byte	
10		(Offset data)	3 byte	(Note 1)
11	R-Y LEVEL	(Reference data)	3 byte	
12		(Offset data)	3 byte	(Note 1)
13	B-Y LEVEL	(Reference data)	3 byte	
14		(Offset data)	3 byte	(Note 1)

(Note 1) : When performed in reference mode selection, offset data outputs the same value as the reference data.

**GAR: Output data to be related to picture quality (RGB1 of the factory menu)**

- Transmit data according to transmission order and size of the table below.
- Command is invalid except RS-232C factory adjustment mode.

Order	Data Contents	Size	Remarks
1	AD MAIN CONT	(Reference data)	(Note 1)
2		(Offset data)	(Note 1) (Note 2)
3	AD R HIGH	(Reference data)	(Note 1)
4		(Offset data)	(Note 1) (Note 2)
5	AD G HIGH	(Reference data)	(Note 1)
6		(Offset data)	(Note 1) (Note 2)
7	AD B HIGH	(Reference data)	(Note 1)
8		(Offset data)	(Note 1) (Note 2)
9	AD R LOW	(Reference data)	(Note 1)
10		(Offset data)	(Note 1) (Note 2)
11	AD G LOW	(Reference data)	(Note 1)
12		(Offset data)	(Note 1) (Note 2)
13	AD B LOW	(Reference data)	(Note 1)
14		(Offset data)	(Note 1) (Note 2)
15	MAT CONT	(Reference data)	(Note 1)
16		(Offset data)	(Note 1) (Note 2)
17	MAT BRIGHT	(Reference data)	(Note 1)
18		(Offset data)	(Note 1) (Note 2)
19	MAT COLOR	(Reference data)	(Note 1)
20		(Offset data)	(Note 1) (Note 2)
21	MAT TINT	(Reference data)	(Note 1)
22		(Offset data)	(Note 1) (Note 2)

(Note 1) Setting data to be unrelated to current input function / input signal / setting output dummy data.

(Note 2) When performed in reference mode selection, offset data outputs the same value as the reference data.

**GPS: Output data to be related to SCREEN adjustment data**

- Transmit data according to transmission order and size of the table below.
- All the data are data of an integrator area.
- Except normal operation mode / each mode of RS-232C integrator adjustment, command is invalid.

Order	Data Contents	Size	Remarks
1	H.POSITION	3 byte	
2	V.POSITION	3 byte	
3	CLOCK	3 byte	(Note 1)
4	PHASE	3 byte	(Note 1)
5	V.SIZE	3 byte	

(Note 1) When current input signal mode is the VIDEO system and INPUT5 (DVI), adjustment data output dummy data (\*).

## GPD (Get Power Down), PD (Power Down) : Outputs information (contents of PD INFORMATION of service factory MENU)

- Output the acquired data according to the transmission order and size of the table below.
- Except RS-232C factory adjustment mode and PD state, command is invalid.
- (Note) Do not perform the "FAY" in the PD state, and information acquisition is possible by perform the "GPD" directly.  
However it is necessary to set ID beforehand.

Order	Data Contents	Size	Remarks
1	The latest 1stPD information	1 byte	(Note 1)
2	The latest 2ndPD information	1 byte	(Note 1)
3	Hour meter information of the latest PD	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE
4	1stPD information before twice	1 byte	(Note 1)
5	2ndPD information before twice	1 byte	(Note 1)
6	Hour meter information of PD before twice	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE
7	1stPD information before three times	1 byte	(Note 1)
8	2ndPD information before three times	1 byte	(Note 1)
9	Hour meter information of PD before three times	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE
10	1stPD information before four times	1 byte	(Note 1)
11	2ndPD information before four times	1 byte	(Note 1)
12	Hour meter information of PD before four times	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE
13	1stPD information before five times	1 byte	(Note 1)
14	2ndPD information before five times	1 byte	(Note 1)
15	Hour meter information of PD before five times	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE
16	1stPD information before six times	1 byte	(Note 1)
17	2ndPD information before six times	1 byte	(Note 1)
18	Hour meter information of PD before six times	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE
19	1stPD information before seven times	1 byte	(Note 1)
20	2ndPD information before seven times	1 byte	(Note 1)
21	Hour meter information of PD before seven times	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE
22	1stPD information before eight times	1 byte	(Note 1)
23	2ndPD information before eight times	1 byte	(Note 1)
24	Hour meter information of PD before eight times	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE

(Note 1) Refer to the following table about contents of PD information

Data	Power Down Point
0	Nothing
1	Y-DRIVE
2	Y-DC/DC CONVERTER
3	X-DC/DC CONVERTER
4	X-DRIVE
5	Power supply
6	ADDRESS junction
7	ADDRESS resonance
8	DC/DC CONVERTER (DIGITAL)

**GWB (Get White Balance): Output data to be related to picture quality / white balance**

- Transmit data according to transmission order and size of the table below.
- Except each normal operation mode / RS-232C integrator adjustment / RS-232C factory adjustment mode, command is invalid.
- In the normal operation / RS-232C integrator adjustment mode, output two data of the current signal mode in the current input function and integrator area of current color mode.
- In the RS-232C factory adjustment mode, output data of factory RGB2.

Order	Data Contents	Size	Remarks
1	CONTRAST	3 byte	
2		3 byte	(Note 2)
3	BRIGHT	3 byte	
4		3 byte	(Note 2)
5	COLOR	3 byte	(Note 1)
6		3 byte	(Note 2)
7	TINT	3 byte	(Note 1)
8		3 byte	(Note 2)
9	R HIGH	3 byte	
10		3 byte	(Note 2)
11	G HIGH	3 byte	
12		3 byte	(Note 2)
13	B HIGH	3 byte	
14		3 byte	(Note 2)
15	R LOW	3 byte	
16		3 byte	(Note 2)
17	G LOW	3 byte	
18		3 byte	(Note 2)
19	B LOW	3 byte	
20		3 byte	(Note 2)
21	H.ENHANCE (H.SHARP)	3 byte	
22	V.ENHANCE (V.SHARP)	3 byte	

(Note 1) Setting data to be unrelated to current input function / input signal / setting output dummy data (\*).

(Note 2) When performed in reference mode selection, offset data outputs the same value as the reference data.

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## GSS: Output data to be related to various established state (SET UP item of menu mode / integrator menu)

- Transmit data according to transmission order and size of the table below.
- Except each normal operation mode / RS-232C integrator adjustment / RS-232C factory adjustment mode, command is invalid.

Order	Data Contents	Size	Output	Remarks
1	COLOR TEMP	1 byte	1: COLOR TEMP1 2: COLOR TEMP2 3: COLOR TEMP3 4: COLOR TEMP4 5: COLOR TEMP5	(Note 1)
2	DIGITAL NR	1 byte	0: OFF 1: LOW 2: MIDDLE 3: HIGH	(Note 1)
3	HIGH CONTRAST	1 byte	0: OFF, 1: ON	
4	PURECINEMA	3 byte	Same as the RS-232C command	(Note 1)
5	COLOR SYSTEM	3 byte	Same as the RS-232C command	(Note 1)
6	CLAMP	1 byte	1: AUTO 2: LOCKED	(Note 1)
7	3DY/C	1 byte	M: MOTION S: STILL	(Note 1)
8	SETTING/VIDEO SIGNAL	3 byte	Same as the RS-232C command	(Note 1)
9	2X2MODE	1 byte	0: OFF 1 to 4: MG1 to MG4 (Refer to item MAGNIFY)	
10	BRIGHT ENHANCE	1 byte	0: OFF, 1: ON	
11	HDTV MODE	3 byte	Same as the RS-232C command	(Note 1)
12	VIDEO INPUT	1 byte	1: COMPONENT1 2: COMPONENT2	(Note 1)
13	Input function	3 byte	IN*	
14	Screen size	1 byte	0: DOT BY DOT 1: 4:3 (TYPE) 2: FULL (TYPE) 3: ZOOM 5: WIDE 6: 100% display	
15	SUB VOLUME (INPUT1)	2 byte	0 to 60	
16	SUB VOLUME (INPUT2)	2 byte	0 to 60	
17	SUB VOLUME (INPUT3)	2 byte	0 to 60	(Note 1)
18	SUB VOLUME (INPUT4)	2 byte	0 to 60	(Note 1)
19	SUB VOLUME (INPUT5)	2 byte	0 to 60	(Note 1)

(Note 1) Setting data to be unrelated to current input function / input signal / setting output dummy data (\*).

**GSO: Output data to be related to various established state**  
**(OPTION item of menu mode / integrator menu)**

- Transmit data according to transmission order and size of the table below.
- Except each normal operation mode / RS-232C integrator adjustment / RS-232C factory adjustment mode, command is invalid.

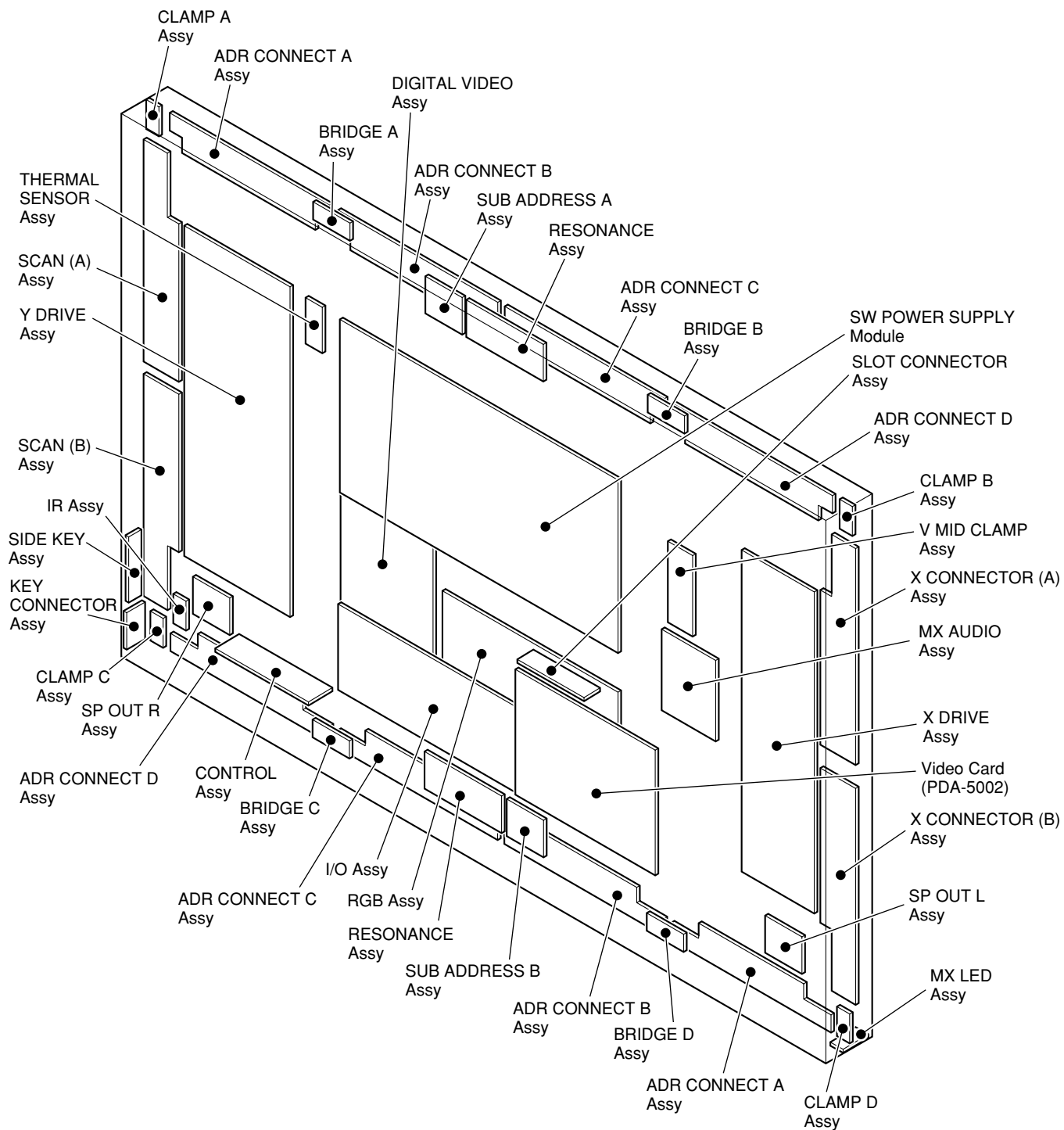
Order	Data Contents	Size	Output	Remarks
1	POWER CONTROL	3 byte	Same as the RS-232C command	
2	OSD display	1 byte	0: OSD display prohibition 1: OSD display permission	
3	FULL MASK	3 byte		Display a RS-232C command of set MASK currently
4	R SIDE MASK LEVEL	3 byte	Adjustment value	
5	G SIDE MASK LEVEL	3 byte	Adjustment value	
6	B SIDE MASK LEVEL	3 byte	Adjustment value	
7	MASK CONTROL	1 byte	0: OFF, 1: ON	
8	ORBITER MODE	1 byte	0: OFF, 1: ON	
9	INVERSE MODE	1 byte	0: OFF, 1: ON	
10	COLOR MODE	1 byte	1: COLOR MODE1 2: COLOR MODE2	
11	MIRROR MODE	1 byte	X: Right and left inverting Y: Top and bottom inverting Z: Top and bottom right and left inverting N: OFF	
12	FAN CONTROL	1 byte	A: AUTO M: MAX	
13	MONITOR NAME	12 byte		
14	SLOT INPUT	1 byte	0: VIDEO (RGB) 1: COMPONENT1 2: COMPONENT2	(Note 1)
15	TEMPERATURE	3 byte	A/D input value	(Note 2)
16	HOUR METER	5 byte		Unit : H
17	KEY LOCK	1 byte	0: Lock release 1: Lock	

(Note 1) Output dummy data (\*) in inside SLOT connection.

## 7. GENERAL INFORMATION

### 7.1 DIAGNOSIS

#### 7.1.1 PCB LOCATION



● Rear View



### 7.1.2 SHUT DOWN/POWER DOWN DIAGNOSIS BY LED DISPLAY

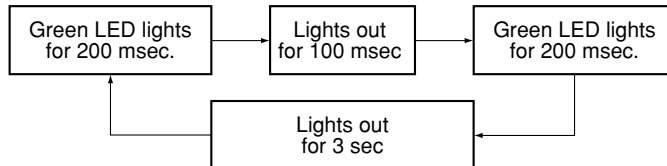
When internal circuit abnormality and other operation abnormality occurred from this unit, self-diagnose display function by STANDBY/ON (LED) indicator is loaded.

Each NG point by LED blinking and a PD (power down) point are as follows.

#### ● Shut Down

- Operations : When a microcomputer detected abnormality, turn the power supply to OFF.
- LED display : Green blinks

Examples: LED blinks in the DIGITAL-IIC communication NG



Number of blinks	Name
1	Panel Microcomputer NG
2	DIGITAL-IIC communication NG
3	Dewdrop abnormality
4	Temperature abnormality
5	FAN abnormality
6	Module microcomputer NG
7	Wide microcomputerNG
8	RGB-IIC communication NG
9	Audio NG

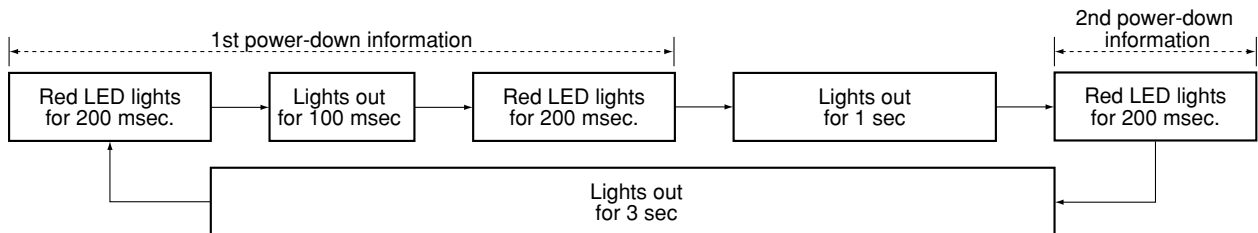
#### How to release the shut down state

When turn the power supply ON by remote control units, release from the shut down state, and turn the power supply ON.  
(It is not necessary to turn the AC power OFF.)

#### ● Power Down

- Operations : When this unit becomes the dangerous state, turn the power supply OFF with the protection circuit.
- LED display : Red blinks
- \* When protection circuit more than two places almost worked simultaneously, display LED in order to 1st - 2nd.

Examples: LED blinks in the 1st power down = Y-DC/DC CONVERTER, 2nd power down = Y-DRIVE



Number of blinks	Name
1	Y-DRIVE
2	Y-DC/DC CONVERTER
3	X-DC/DC CONVERTER
4	X-DRIVE
5	Power supply
6	Address junction
7	Address resonance
8	DIGITAL-DC/DC CONVERTER

#### How to release the power down state

AC power OFF



Wait for PD LED in the power supply module disappearing (for around 30 seconds).



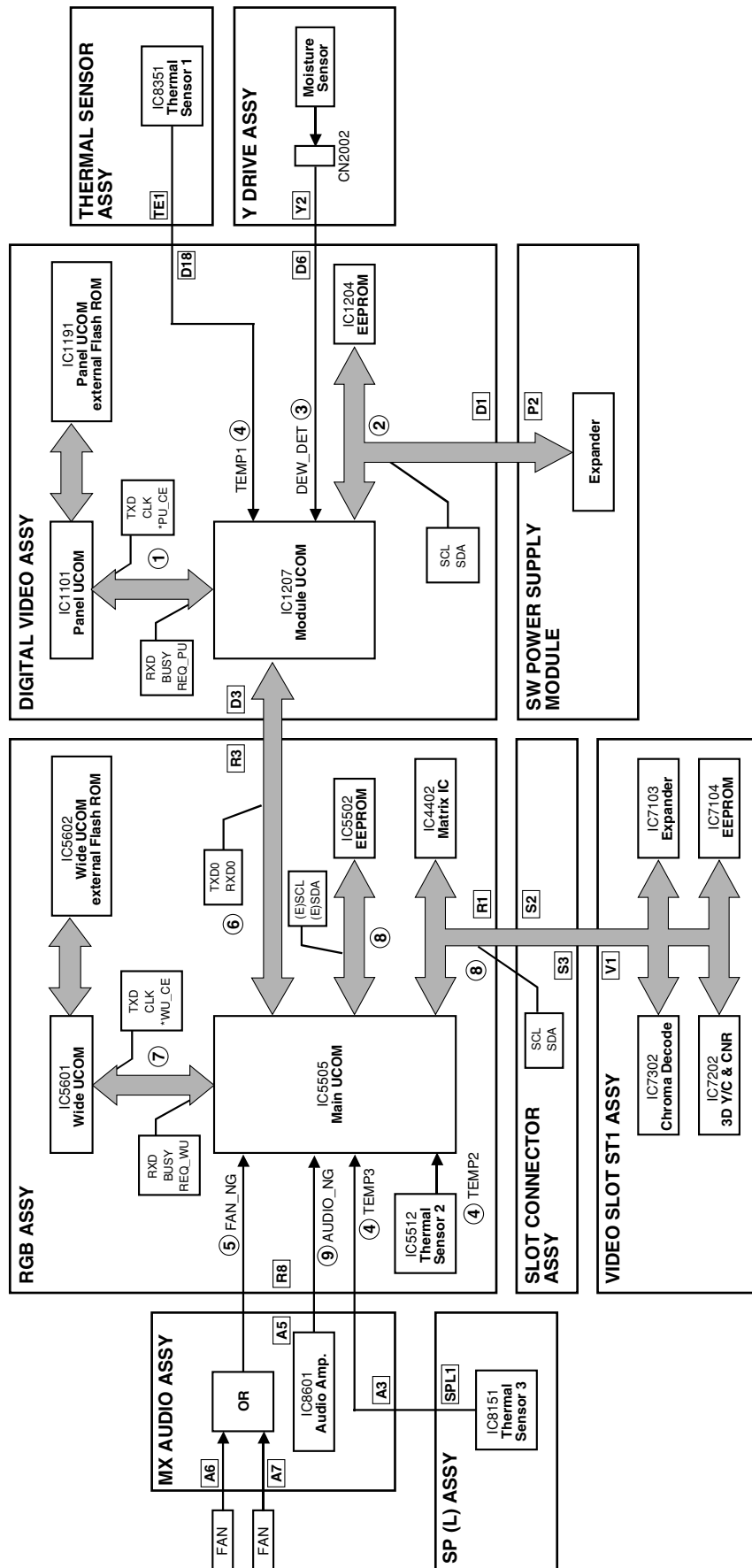
Afterwards, wait moreover for five seconds.



Return by AC power ON.

\* After power down release, this unit rises up in the standby state.

## ● Block Diagram of Shut Down Signal System



Note: ① - ⑧ show LED flashing number of times when shut down occurred in this route.

## ● Shut down diagnosis

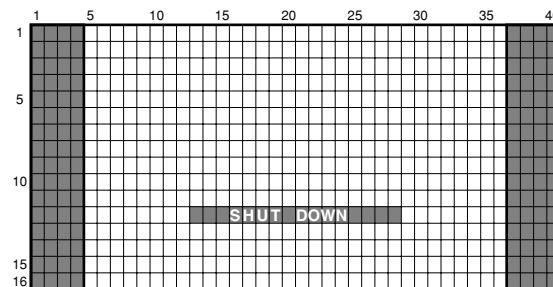
### ① Panel microcomputer NG

When a module microcomputer failed in communication with a panel microcomputer, this NG occurs.

Shut down after OSD display for 30 seconds from the NG detection.

#### Abnormality to expect

Open / Short of communication line in the Assy



### ② DIGITAL-IIC communication NG

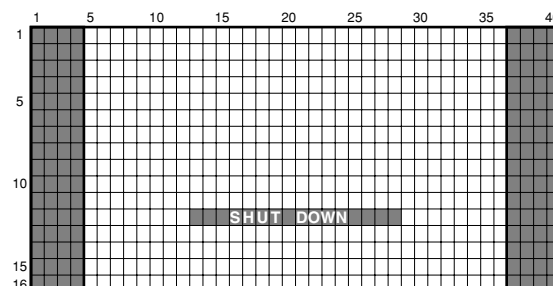
When a module microcomputer failed in communication with outside EEPROM or EXPANDER, this NG occurs.

Shut down after OSD display for 30 seconds from the NG detection.

\* However, this communication NG may occur in the standby state.

#### Abnormality to expect

- Open / Short of communication line in the Assy
- Breaking of wire between DIGITAL VIDEO Assy (D1) and SW POWER SUPPLY Module (P2).



### ③ Dew drop detection

When it becomes the dew drop state in this unit, this NG occurs.

After the dew drop detection, shut down immediately.

#### Abnormality to expect for dew drop

Disconnect a connector CN2002 between Dew drop sensor and Y DRIVE Assy.

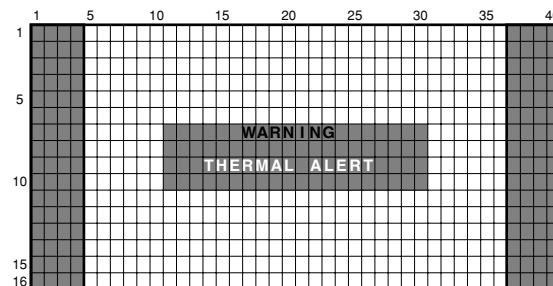
### ④ Temperature abnormality

When temperature of this unit became abnormally high, this NG occurs.

Shut down after OSD display from the NG detection for 30 seconds.

#### Abnormality to expect when it occurs in the environment that is not high-temperature

- Disconnect a connector between SP TERMINA (L) Assy (SPL1) and MX AUDIO Assy (A3).
- Disconnect a connector between MX AUDIO Assy (A5) and RGB Assy (R8).
- Disconnect a connector between DIGITAL VIDEO Assy (D18) and temperature sensor 1 (TE1).



## Reference

Shut down temperature of each temperature sensor

TEMP2 data  $\geq 150$  ( $\approx 80^{\circ}\text{C}$ )

TEMP3 data  $\geq 101$  ( $\approx 56^{\circ}\text{C}$ )

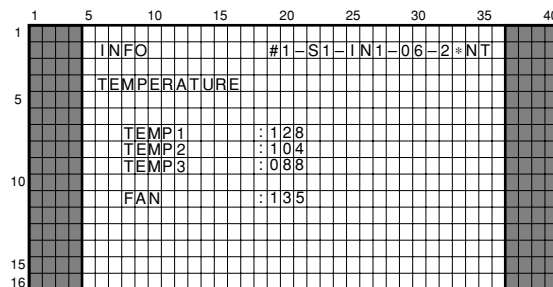
\* TEMP1 is not shut down by temperature, and it shuts down when connector was disconnected.

Temperature display by "INFORMATION" of the factory menu

TEMP1 ( $^{\circ}\text{C}$ )  $\approx$  TEMP1 (data) -50

TEMP2 ( $^{\circ}\text{C}$ )  $\approx$  TEMP2 (data) /2+5

TEMP3 ( $^{\circ}\text{C}$ )  $\approx$  TEMP3 (data) /2+5



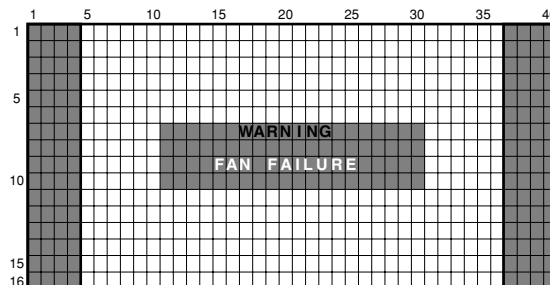
## ⑤ FAN NG

When a fan does not function, this NG occurs.  
Shut down after OSD display for 30 seconds from the NG detection.

- \* FAN NG detection functions only in case of following.
  - When FAN CONTROL setting is maximum
  - When sensor temperature of TEMP3 is more than 30°C with FAN CONTROL setting is AUTO.  
(even if connector is left when does not turn the FAN, this unit does not work.)

### Abnormality to expect

- Disconnect a junction connector between FAN (A6) and MX AUDIO Assy (A7).
- Disconnect a connector between MX AUDIO Assy (A5) and RGB Assy (R8).
- FAN forced stop by an alien substance involving it.

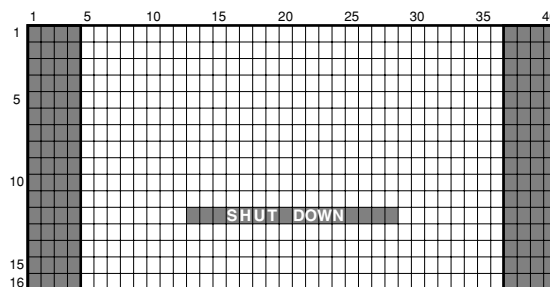


## ⑥ Module microcomputer NG

When a main microcomputer failed in communication with a module microcomputer, this NG occurs.  
Shut down after OSD display for 30 seconds from the NG detection.  
\* However, this communication NG may occur by the standby state.

### Abnormality to expect

- Open / Short of communication line in the Assy.
- Disconnect a connector between RGB Assy (R3) and DIGITAL VIDEO Assy (D3).
- Writing defectiveness of module microcomputer (IC1207) software.

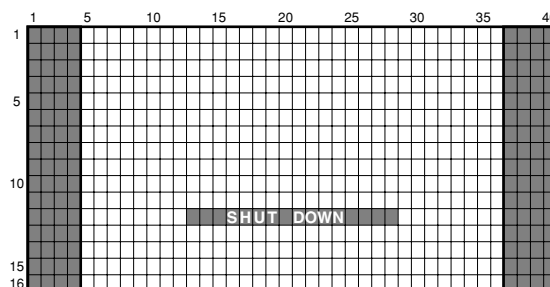


## ⑦ Wide microcomputer NG

When a main microcomputer failed in communication with a wide microcomputer, this NG occurs.  
Shut down after OSD display for 30 seconds from the NG detection.

### Abnormality to expect

- Open / Short of communication line in the Assy.
- Software writing defectiveness of wide microcomputer (IC5601).
- Writing defectiveness of outside Flash ROM (IC5602) on the wide microcomputer.



## ⑧ RGB-IIC communication NG

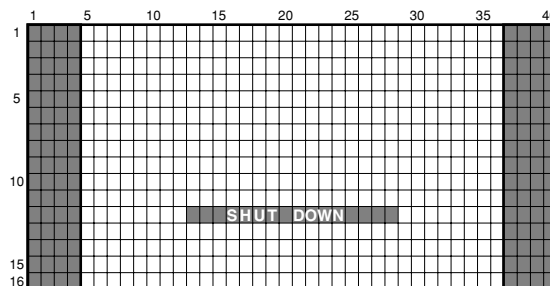
When a main microcomputer failed in IIC communication, this NG occurs.  
Shut down after OSD display for 30 seconds from the NG detection.  
\* However, this communication NG may occur by the standby state.

### Abnormality to expect

- Open / Short of communication line in the Assy.
- SLOT and the insertion of the SLOT junction PC Board are incomplete.

**Notes:** There is the case that it becomes the following symptom except NG when the SLOT insertion is incomplete.

- Audio of INPUT3 and 4 are not output.
- Do not switch from INPUT3 to 5 (SLOT function).
- Video signal of INPUT1 and 2 are not appear.



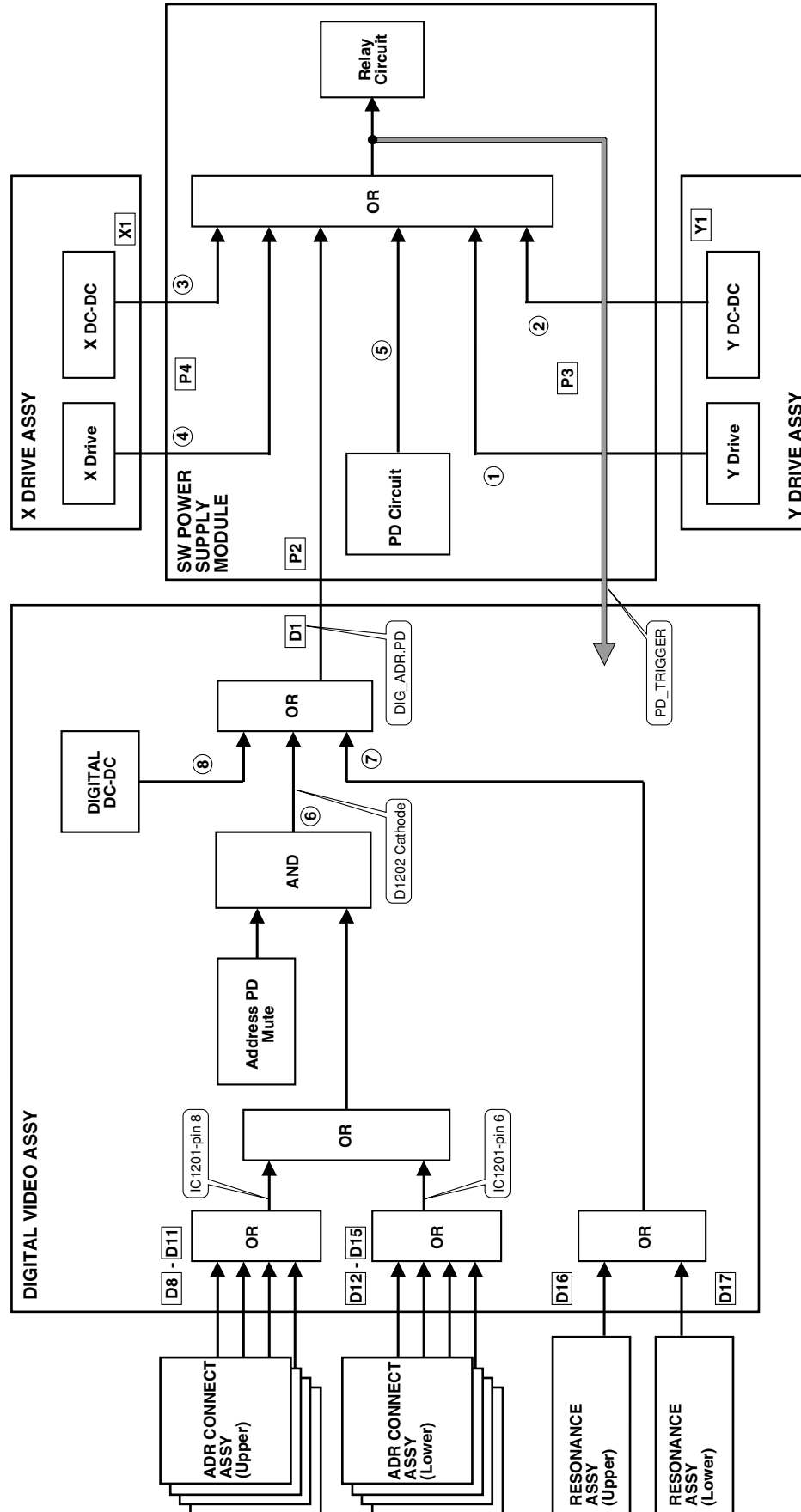
## ⑨ Audio NG

When DC component added on the speaker output line, this NG occurs.  
After the NG detection, shut down immediately.

### Abnormality to expect

- Disconnect a connector between MX AUDIO Assy (A5) and RGB Assy (R8).
- Short-circuits between + and - of C8615 and C8622.

### ● Block Diagram of Power Down Signal System



**Note:** ① - ⑧ show LED flashing number of times when power down occurred in this route.

# PDP-503CMX, PDP-503MXE, PDA-5002

## ● Kind and function of the various protection circuit (P.D. circuit)

Assy Name	OSD Display	Red LED Number of Blinks	Kind of P.D. Circuit	Function	Remarks
Y DRIVE Assy	Y-DRV	1	VCP OCP	P.D. by VCP overcurrent	
	Y-DDC	2	VOFS OVP	P.D. by VOFS overvoltage	
			VOFS UVP	P.D. by VOFS undervoltage (= overcurrent)	
			VH OVP	P.D. by VH overvoltage	
			VH UVP	P.D. by VH undervoltage (= overcurrent)	
			IC5V UVP	P.D. by IC5V undervoltage (= overcurrent)	
X DRIVE Assy	X-DDC	3	VRN OVP	P.D. by VRN overvoltage	
			VRN UVP	P.D. by VRN undervoltage (= overcurrent)	
	X-DRV	4	VCP OCP	P.D. by VCP overcurrent	
			RESET OCP	P.D. by reset circuit overcurrent	
SW POWER SUPPLY Module	POWER	5	VSUS OVP	P.D. by VSUS overvoltage	
			VSUS UVP	P.D. by VSUS undervoltage (= overcurrent)	
			VADR OVP	P.D. by VADR overvoltage	
			VADR UVP	P.D. by VADR undervoltage (= overcurrent)	
			15V OVP	P.D. by 15V overvoltage	
			15V UVP	P.D. by 15V undervoltage (= overcurrent)	
			12V UVP	P.D. by 12V undervoltage (= overcurrent)	
			6.5V OVP	P.D. by 6.5V overvoltage	
			6.5V UVP	P.D. by 6.5V undervoltage (= overcurrent)	
			13.5V UVP	P.D. by 13.5V undervoltage (= overcurrent)	
			-9V UVP	P.D. by -9V undervoltage (= overcurrent)	
			+B OVP	P.D. by +B overvoltage	
			+B OCP	P.D. by +B overcurrent	
			AC200V P.D.	P.D. by AC200V apply	Note 1
				PFC module overheat protection	
				VSUS arc resistance overheat protection	
ADR CONNECT Assy	ADRES	6	ADR.PD	P.D. by disconnecting the connector	
RESONANCE Assy	ADR-K	7	ADR.K.PD	P.D. by ICP open and TCP defective	
DIGITAL VIDEO Assy	DC-DC	8	5.0V OVP	P.D. by 5V overvoltage	
			5.0V UVP	P.D. by 5V undervoltage (= overcurrent)	
			3.3V OVP	P.D. by 3.3V overvoltage	
			3.3V UVP	P.D. by 3.3V undervoltage (= overcurrent)	
			2.5V OVP	P.D. by 2.5V overvoltage	
			2.5V UVP	P.D. by 2.5V undervoltage (= overcurrent)	

### Reference

OVP : Over Voltage Protect

UVP : Under Voltage Protect

OCP : Over Current Protect

**Note 1:** AC200V P.D. is not applicable to the PDP-503MXE model.

## ● Diagnosis Method in Power Down

1st/2nd/time stamp are stored eight times of power down in the past.

### ① OSD display of PD history

Display with "INFORMATION" of the factory menu.

1	5	10	15	20	25	30	35	40
1		INFO						
5		PD	INFO					
10								
15								
16								

### Display of PD point

Power Down Point	OSD Display
Y-DRIVE	Y-DRV
Y-DC/DC CONVERTER	Y-DDC
X-DC/DC CONVERTER	X-DDC
X-DRIVE	X-DRV
Power supply	POWER
ADDRESS junction	ADRES
ADDRESS resonance	ADR-K
DC/DC CONVERTER (DIGITAL)	DC-DC

Time stamp display

[OOOOOH] : HOUR, [OOM] : MINUTE

Example)

Time stamp display is [65432H10M] → 65432 hours 10 minutes

### ② PD history read in by RS-232C command "GPD"

Order	Data contents	Size
1	The latest 1st PD point	1 byte
2	The latest 2nd PD point	1 byte
3	The latest PD time stamp	7 byte
4	1st PD point before twice	1 byte
5	2nd PD point before twice	1 byte
6	PD time stamp before twice	7 byte
7	1st PD point before three times	1 byte
8	2nd PD point before three times	1 byte
9	PD time stamp before three times	7 byte
10	1st PD point before four times	1 byte
11	2nd PD point before four times	1 byte
12	PD time stamp before four times	7 byte
13	1st PD point before five times	1 byte
14	2nd PD point before five times	1 byte
15	PD time stamp before five times	7 byte
16	1st PD point before six times	1 byte
17	2nd PD point before six times	1 byte
18	PD time stamp before six times	7 byte
19	1st PD point before seven times	1 byte
20	2nd PD point before seven times	1 byte
21	PD time stamp before seven times	7 byte
22	1st PD point before eight times	1 byte
23	2nd PD point before eight times	1 byte
24	PD time stamp before eight times	7 byte

### Data of PD point

Power Down Point	"GPD" Data
Y-DRIVE	1
Y-DC/DC CONVERTER	2
X-DC/DC CONVERTER	3
X-DRIVE	4
Power supply	5
ADDRESS junction	6
ADDRESS resonance	7
DC/DC CONVERTER (DIGITAL)	8

Time stamp data

before 5 byte: HOUR, after 2 byte: MINUTE

Example)

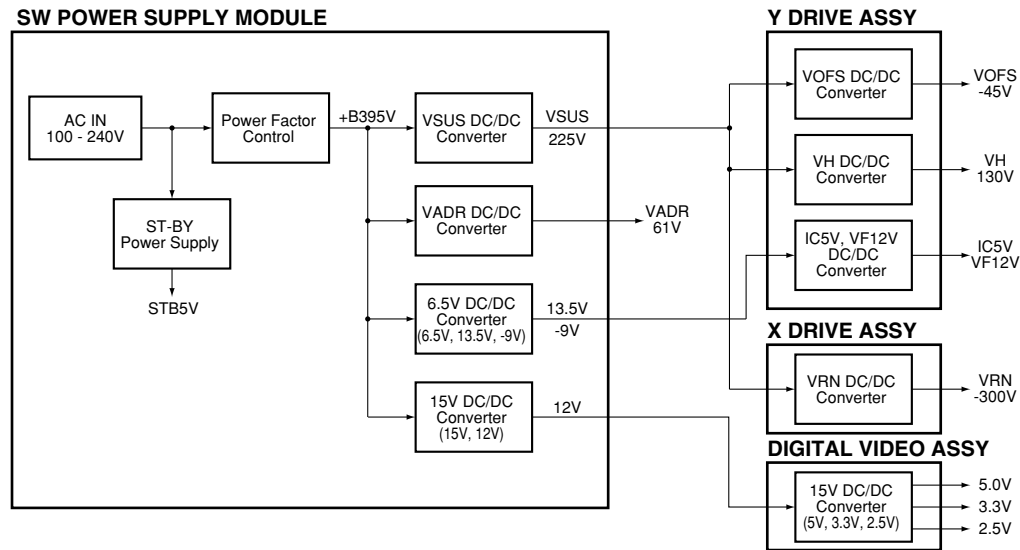
Time stamp is [6543210] → 65432 hours 10 minutes

● Diagnosis of the error point in the various protection circuit (P.D. circuit) operation (Red LED blinks)

Number of Blinks	P.D. Point in Operation	Error Pont	Possible Part of Error	Circuit State	Operation P.D. Circuit	Diagnosis Condition
1	Y DRIVE	Y DRIVE Assy	IC2206, IC2214 (Pulse module), IC2203, IC2204, IC2212, IC2213, IC2213, IC2217, R2209	K2211 Lo	VCP OCP	
		VOFS D/D CONV. BLOCK (Y DRIVE Assy)	IC2702, IC2709, IC2715	K2712 Lo	VOFS OVP	
		VOFS D/D CONV. BLOCK (Y DRIVE Assy)	IC2701, IC2702, IC2709, IC2715	K2709 Lo	VOFS UVP	Drive section (control signal, output elements etc.) in normal operation
		VH D/D CONV. BLOCK (Y DRIVE Assy)	Q2211, Q2212, R2277, IC2208, IC2210	K2719 Lo	VH OVP	VOFS D/D CONV. BLOCK in normal operation
2	Y DC DC	VH D/D CONV. BLOCK (Y DRIVE Assy)	IC2712, IC2716			Drive section (control signal, output elements etc.) in normal operation
		SCAN (A), (B) Assy	IC2711, IC2712, IC2716	K2718 Lo	VH UVP	VH D/D CONV. BLOCK in normal operation
		IC5V D/D CONV. BLOCK (Y DRIVE Assy)	SCAN IC			SCAN Assy in normal operation
		SCAN (A), (B) Assy	IC2704, IC2706, IC2717	K2713 Lo	IC5V UVP	IC5V D/D CONV. BLOCK in normal operation
		IC5V D/D CONV. BLOCK (Y DRIVE Assy)	SCAN IC			SCAN Assy in normal operation
3	X DC DC	VRN D/D CONV. BLOCK (X DRIVE Assy)	IC2704, IC2706, IC2717	K3708 Lo	VRN OVP	
		VRN D/D CONV. BLOCK (X DRIVE Assy)	IC3702, IC3712			
		VRN D/D CONV. BLOCK (X DRIVE Assy)	IC3701, IC3702, IC3712	K3705 Lo	VRN UVP	Drive section (control signal, output elements etc.) in normal operation
4	X DRIVE	X DRIVE Assy	Q3122	K3103 Lo	VCP OCP	
		X DRIVE Assy	IC3200, IC3201 (pulse module), IC3103, IC3104, IC3106, IC3107, IC3110, IC3113, R3109	K3102 Lo	VRN OCP	
		X DRIVE Assy	Q3122			
5	PS	MX AUDIO Assy	IC3200, IC3201 (Pulse module)			When P4 connector disconnected, P.D. does not occur
		ADDRESS CONNECT A - D Assy, RESONANCE Assy, D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC2206, IC2214 (Pulse module)			When P3 connector disconnected, P.D. does not occur
		SW POWER SUPPLY Module	IC8601 (Audio IC)			When P6 connector disconnected, P.D. does not occur
		ADDRESS CONNECT A-D Assy	SW POWER SUPPLY Module			When pin 5 of P2 connector disconnected, P.D. does not occur
6	ADR	ADDRESS CONNECT A-D Assy	Disconnect D8 - D15 connector/s		ADR. PD	When the voltage is not output even if P4, P3 and P6 connectors disconnected
7	ADR K	RESONANCE Assy	TCP damage of IC6704 (ICP), disconnect D16 and D17 connectors, panel microcomputer is defective, outside Flash ROM of the panel microcomputer is defective.		ADR. K. PD	
8	DIGITAL DC DC	D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1901 Lo	5.0V OVP	<p><b>Note: About PS PD</b>                      The condition that Red LED blinks five times (power supply PD)                      1 When the internal protection circuit of SW POWER SUPPLY Module worked                      2 When a microcomputer was not able to identify the PD point                      ↓                      Being careful because the protection circuit of SW POWER SUPPLY Module cannot conclude that worked.</p>
		D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1902 Lo	5.0V UVP	
		D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1903 Lo	3.3V OVP	
		D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1904 Lo	3.3V UVP	
		D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1905 Lo	2.5V OVP	
		D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1906 Lo	2.5V UVP	



## ● Block diagram for Power supply section



## ● Supplementary information

### 1. Power on/off switch for the large-signal system (SW102)

**Function:** Only the power for the small-signal system (15V, 12V, 6.5V, 13.5V, and -9V) is on, and the power for the large-signal system (VSUS, VADR) is off.

**Usage:** Use when only an operational check for the small-signal system is required.

**Supplementary information:**

When this switch is to be used, the wires of pin 5 (DIG, ADR, and PD) of the P2 connector of the power-supply module should be disconnected to prevent the PD circuit from operating. To turn the power of the large-signal system off without using this switch, operation from an external PC through RS-232C commands "DRF" is basically required. In this case, the above procedure is not required, as the PD circuit is muted by software.

#### Method of power supply ON in the large signal system OFF state with RS-232C command

- ① Confirm that this unit is the standby state.
  - ② Transmit RS-232C command "DRF."
  - ③ Turn the power supply ON by remote control unit, side key or command "PON."
- \* When turn the power supply OFF once, return to setting of large signal system ON.  
When turn the power supply ON in the large signal system OFF, transmit "DRF" command each time.

### 2. 200V AC power-down switch (SW101)

**Function:** While 200V AC voltage is applied, operation of the PD circuit is turned on and off (ON when the switch is set to 100V AC, and OFF when the switch is set to 200V AC).

**Setting:** For the MXE model only, the switch is set to 200V, and for other models, it is set to 100V.

### 3. Temperature compensation of the VOFS voltage for the drive system

**Function:** Control the power supply voltage mentioned above according to temperature. (Temperature compensation works so that the voltage is lowered on the lower-temperature side, and is raised on the higher-temperature side.)

**Purpose:** To improve the yield by compensating the temperature characteristics of the panel.

**Supplementary information:**

For this model, temperature compensation is performed only for the VOFS voltage, and not for the VSUS voltage, and it is controlled by software.

### 4. When a fuse blows

- If a fuse blows, never turn the power on again only after replacing the fuse. (In most cases, the fuse itself did not have any problem. So as long as factors of overcurrent have not been removed, chances of destruction increase every time the power is turned on. In the worst case, about a dozen parts may be destroyed.)
- Principally, the whole power-supply module must be replaced.

### 5. Voltage adjustment of the panel drive

As this model employs the electronic VR system for the VSUS and VOFS voltages, and as the voltage-adjustment data are stored in the DIGITAL assembly, voltage adjustment of the panel drive is not necessary when the power-supply modules are changed. (For VADR, VH, and VRN, adjustments with semifixed VR controls are necessary.)

For this model, as the power-supply block has been developed and designed by an outside vendor, at the point you know which module is a cause of failure (through diagnosis described elsewhere in this manual), change the corresponding modules, and do not diagnose or repair the module.

Similarly, the switches and the semifixed VRs inside the power-supply module must not be adjusted without a special reason.

## 7.1.3 AUTOMATIC BACKUP OF DIGITAL VIDEO ASSY DATA

### ■ Description

Auto copies data of EEPROM (IC1204/2k bit) on the DIGITAL VIDEO Assy as data for backup in the Assy replacement to one part of EEPROM (IC5502/64k bit) of the RGB Assy (area A of figure below).

Therefore DIGITAL VIDEO Assy or main unit adjustment item in the RGB Assy replacement (data of EEPROM on DIGITAL VIDEO Assy) is succeeded to Assy after replacement.

**Note :** COLOR and TINT are main unit adjustment items, but does not automatic backup because there are data in area C (refer to figure below).

### ● Contents of EEPROM on the DIGITAL VIDEO Assy

- Adjustment value of PANEL White Barance
  - PANEL-R HIGH : Main unit adjustment item
  - PANEL-G HIGH : Main unit adjustment item
  - PANEL-B HIGH : Main unit adjustment item
  - PANEL-R LOW : Main unit adjustment item
  - PANEL-G LOW : Main unit adjustment item
  - PANEL-B LOW : Main unit adjustment item
- Adjustment value of ABL
  - ABL LEVEL : Main unit adjustment item
- Adjustment value of drive system
  - X-SUS-B : Main unit adjustment item
  - X-SUS-G : Main unit adjustment item
  - Y-SUS-B : Main unit adjustment item
  - Y-SUS-G : Main unit adjustment item
  - V-SUS : Main unit adjustment item
  - V-OFFSET : Main unit adjustment item
- Pulse meter
- Hour meter
- Setting data of various FULL MASK

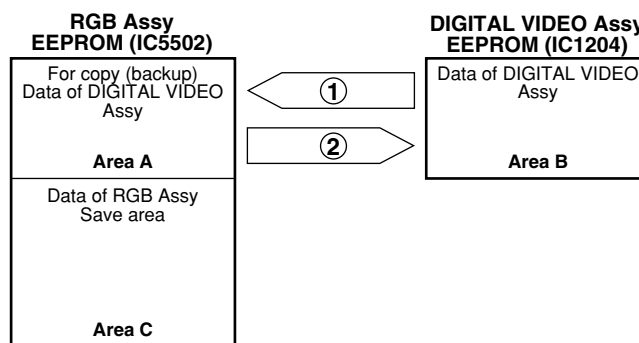
Perform automatic data backup

Perform automatic data backup

Perform automatic data backup

### ■ Flow of basic automatic backup

Use a key word, and judge each data (area A and B) whether it is the adjusted data or the not adjusted data, and perform the copy operation.



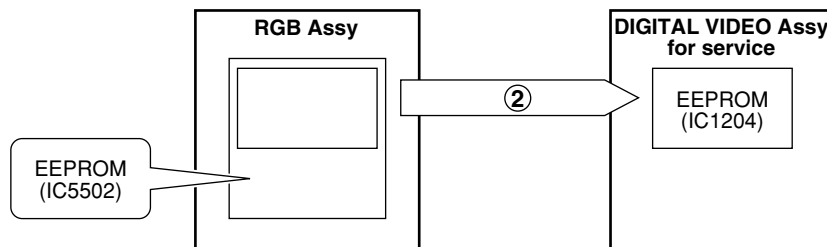
- ① Perform the copy whenever enter the service factory mode. (There is not relation in a key word.)
- ② In the power supply ON, confirm a key word, and perform the copy when a key word of DIGITAL VIDEO Assy (area B) does not adjust and a key word of RGB Assy is adjustment complete.

## ■ Actual automatic backup operation

### 1. In the DIGITAL VIDEO Assy replacement (Use the service Assy)

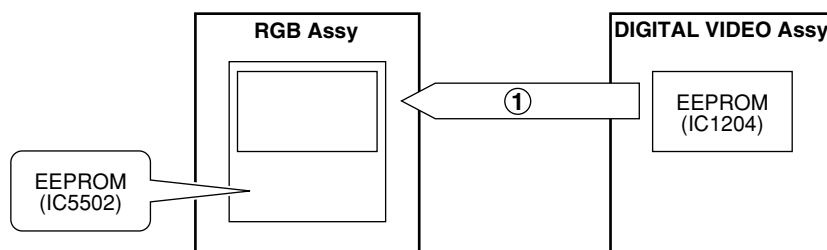
Do not need modification of key words.

Replace DIGITAL VIDEO Assy with DIGITAL VIDEO Assy for service, and auto copies the backup data from EEPROM of RGB Assy to EEPROM of DIGITAL VIDEO Assy by turning the power on.



### 2. In the RGB Assy replacement (Do not need to be service Assy.)

Replace RGB Assy, and auto copy from EEPROM of DIGITAL VIDEO Assy to EEPROM of RGB Assy as for backup by enter the service factory mode.



### 3. In the DIGITAL VIDEO Assy replacement (Recycling of a repair part)... When install DIGITAL VIDEO Assy after repair to other sets.

Set a key word of DIGITAL VIDEO Assy to recycle in "Do not adjust".

Enter the service factory mode before removing the DIGITAL VIDEO Assy to recycle, and execute SERVICE PARTS of item INITIALIZE. (However, limit it when work as the main unit and OSD display is possible.)

Readjustment is necessary when cannot execute SERVICE PARTS.

**Note:** When does not change key word and repairs the DIGITAL VIDEO Assy and installed the DIGITAL VIDEO Assy after repair in another set 2, this function does not work in normal.

In addition, when have entered the service factory mode in the state mentioned above, copy data in the DIGITAL VIDEO Assy of set 1 before repair to area A in the RGB Assy of set 2 to install after repair.

Therefore necessary data have been performed overwrite with set 2.

Cannot replace the data which performed overwriting once.

### 4. In the DIGITAL VIDEO Assy replacement (Recycling of a repair part)... When install the DIGITAL VIDEO Assy after repair to the former set

Do not need modification of key words.

After repair the DIGITAL VIDEO Assy, work with the main unit adjustment value as before by installing it to the former set.

Perform the same operation as item 1 afterward.

### 5. When replace the DIGITAL VIDEO Assy and the RGB Assy to another Assy simultaneously

Normal copy with this function does not work. Readjustment is necessary.

## ■ Others

### 1. COLOR and TINT are main unit adjustment items, but does not automatic backup because there are data in area C.

About these two items

#### ① When replaced only the DIGITAL VIDEO Assy

Readjustment is unnecessary so that data is stored in the RGB Assy.

#### ② When replaced the RGB Assy

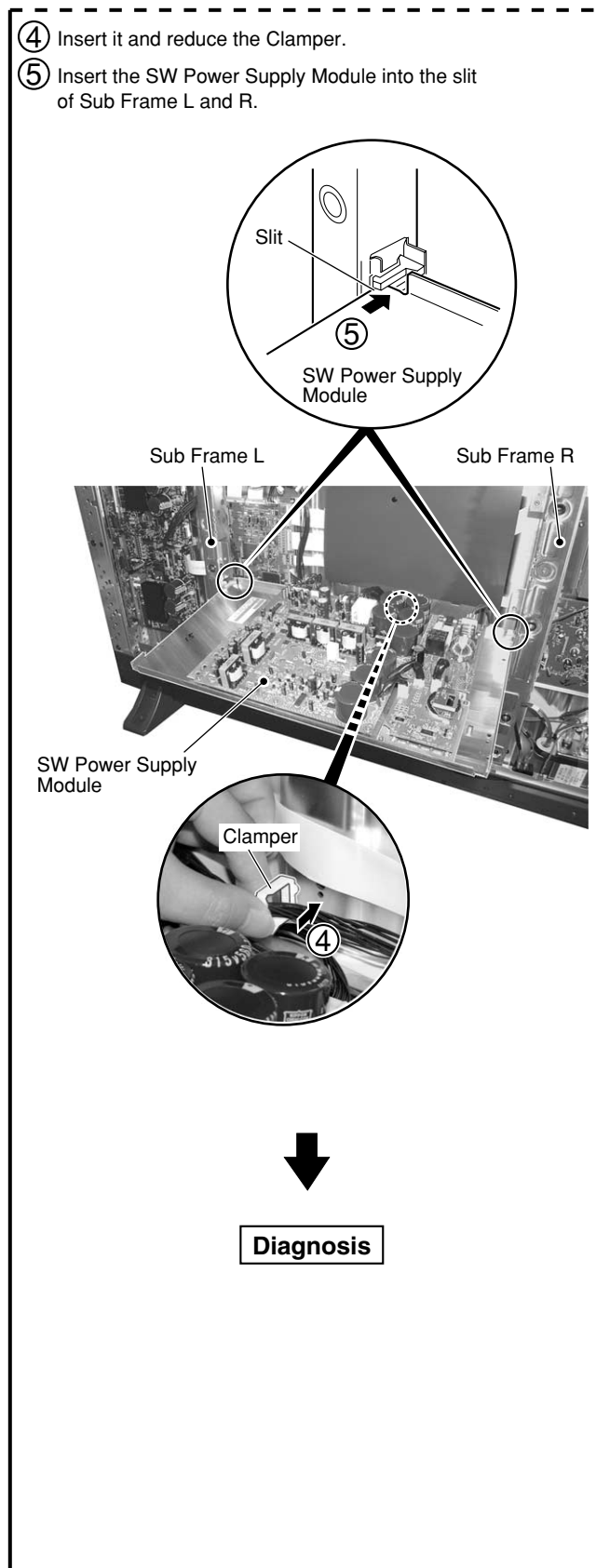
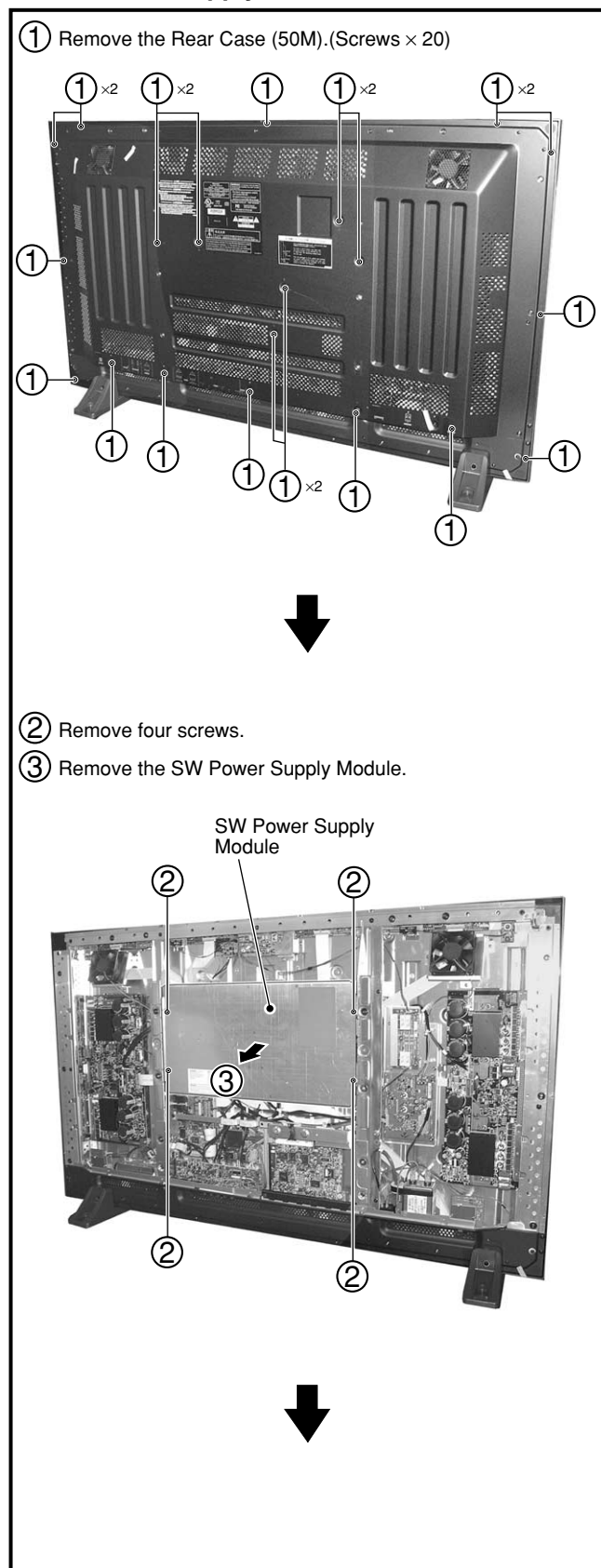
Readjustment is necessary after repair.

### 2. Data in EEPROM of the RGB Assy (area C) are Assy adjustment items except COLOR and TINT.

Do not need a readjustment when replaced the Service Assy.

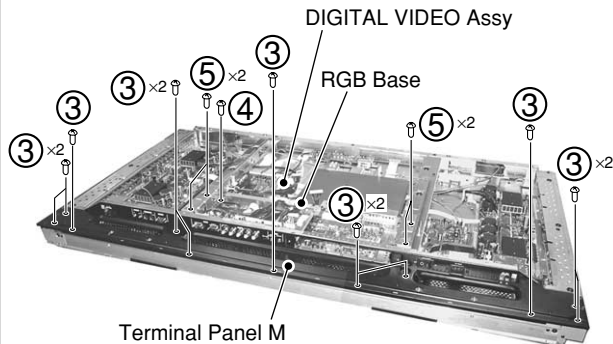
## 7.1.4 DISASSEMBLY

### SW Power Supply Module

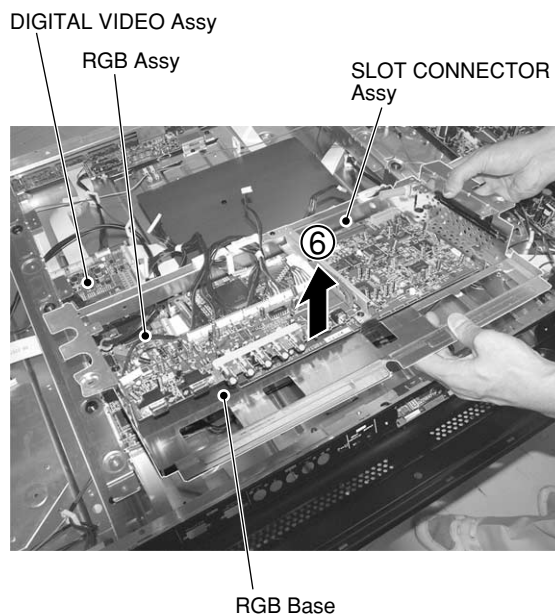


**DIGITAL VIDEO Assy**

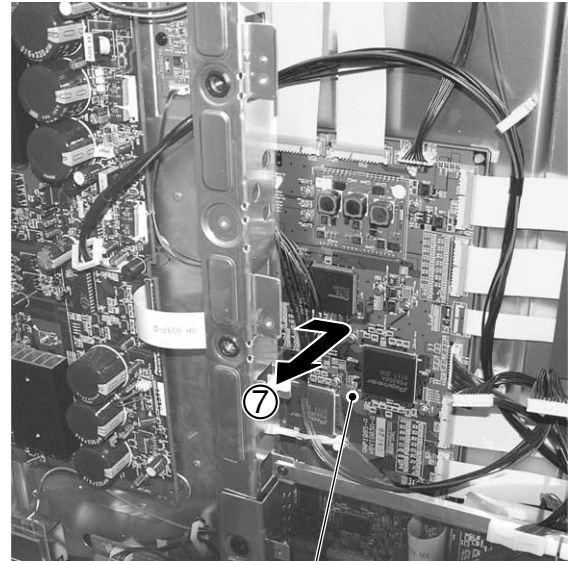
- ① Remove the Rear Case (50M). (Screws × 20)
- ② Remove the SW Power Supply Module.  
(Connector, Screws × 4)
- ③ Remove the Terminal Panel M. (Screws × 11)
- ④ Remove a screw of earth block.
- ⑤ Remove the RGB Base. (Screws × 4)



- ⑥ Remove connectors and binders, and remove the RGB Base with PCB Assys.



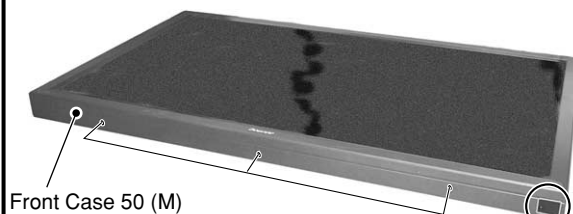
- ⑦ Remove the DIGITAL VIDEO Assy.  
(Connector, Circuit Board Spacer × 6)



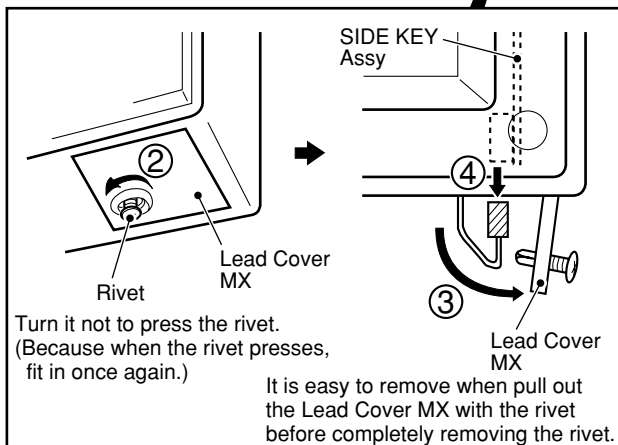
DIGITAL VIDEO Assy

■ Y DRIVE, SCAN (A), (B) Assy

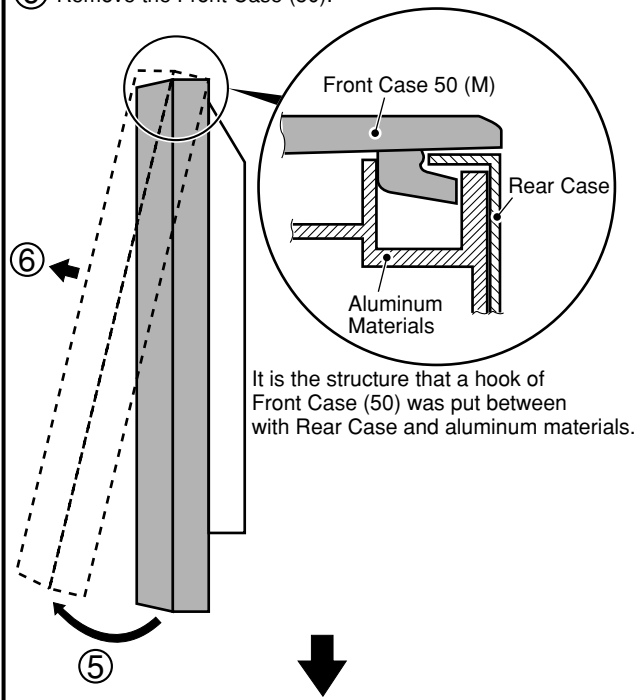
- ① Remove the three screws.



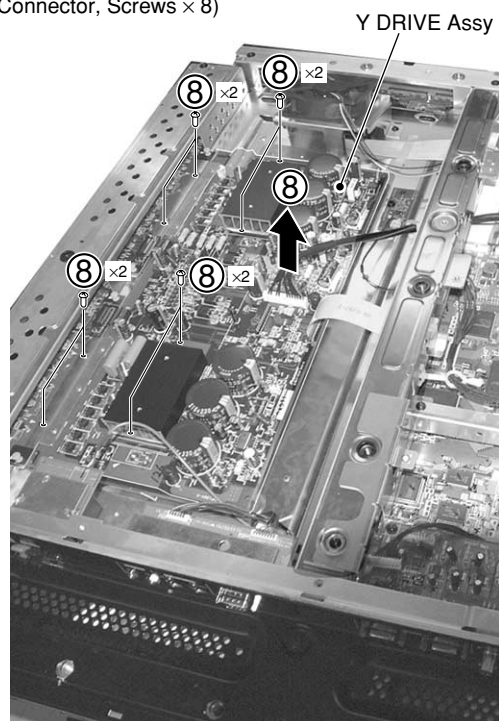
- ② Loosen a rivet.
- ③ Remove the Lead Cover MX.
- ④ Pull out a Flexible Cable.



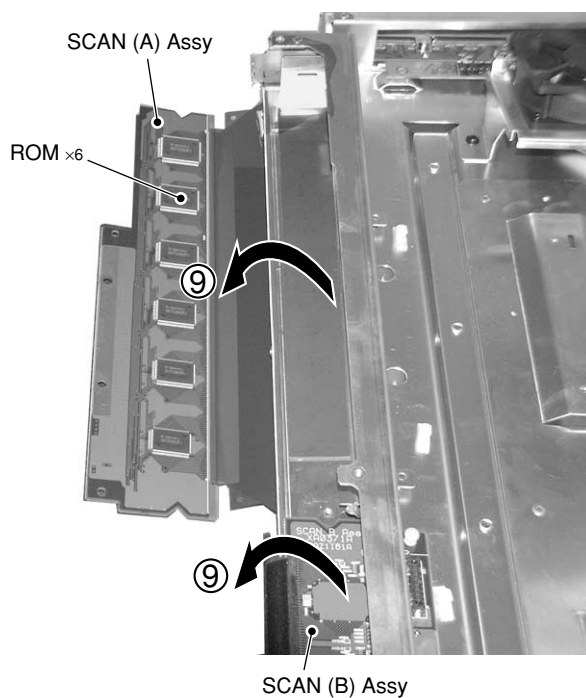
- ⑤ Remove bottom by the fulcrum at the top of Front Case (50).
- ⑥ Remove the Front Case (50).



- ⑧ Remove the Y DRIVE Assy.  
(Connector, Screws × 8)

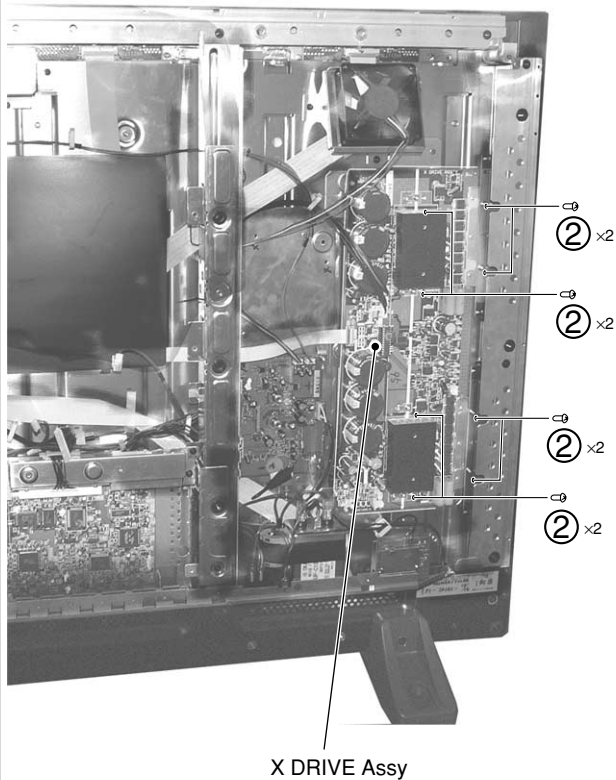


- ⑨ Reverse the SCAN (A) and SCAN (B) Assemblies.
- ⑩ When it is necessary, exchange the ROM.



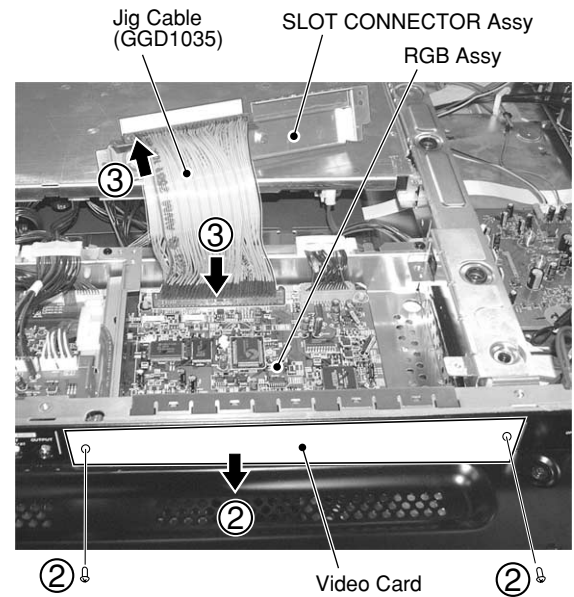
## X DRIVE Assy

- ① Remove the Rear Case (50M). (Screws × 20)
- ② Remove the X DRIVE Assy. (Connector, Screws × 8)

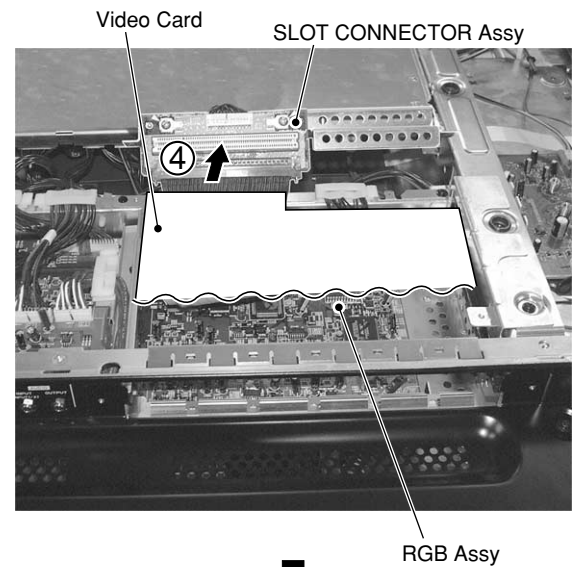


## Diagnosis of the Video Card (PDA-5002)

- ① Remove the Rear Case (50M). (Screws × 20)
- ② Remove the Video Card. (Screws × 2)
- ③ Remove the SLOT CONNECTOR Assy from the RGB Assy and reconnect it with the Jig Cable (GGD1035).



- ④ Reconnect the Video Card. (Slot does not pass it.)



Diagnosis

7.2 IC INFORMATION

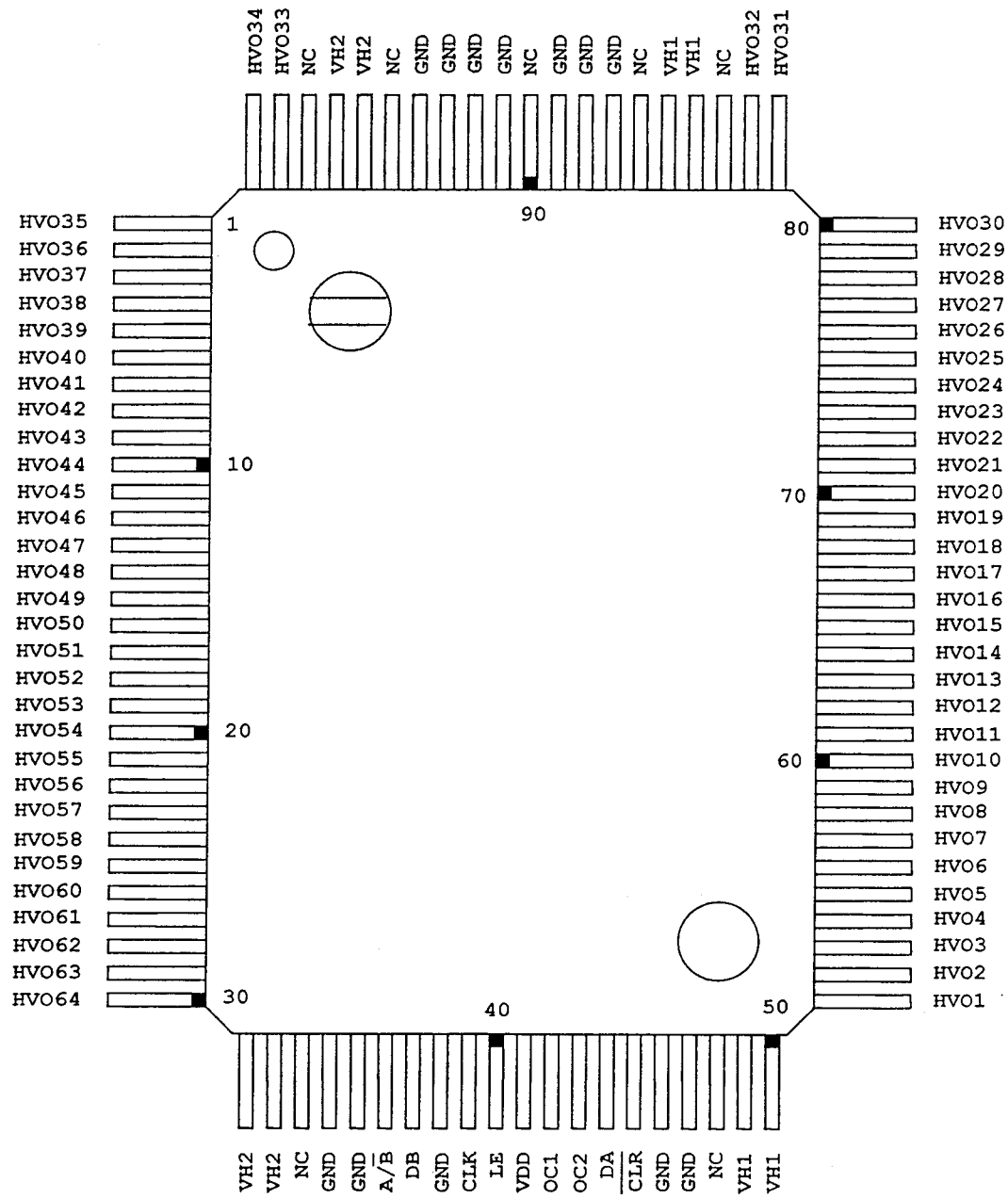
● The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

●List of IC

SN755860PJ, M30624FGAFP, HD64F2328VF, GAL22V10, M30624FGAFP, PD6358A, PST9246N, FS781BZB, ML6426CS-1, CXA3516R, BA5417, STK795-460, TFP201A

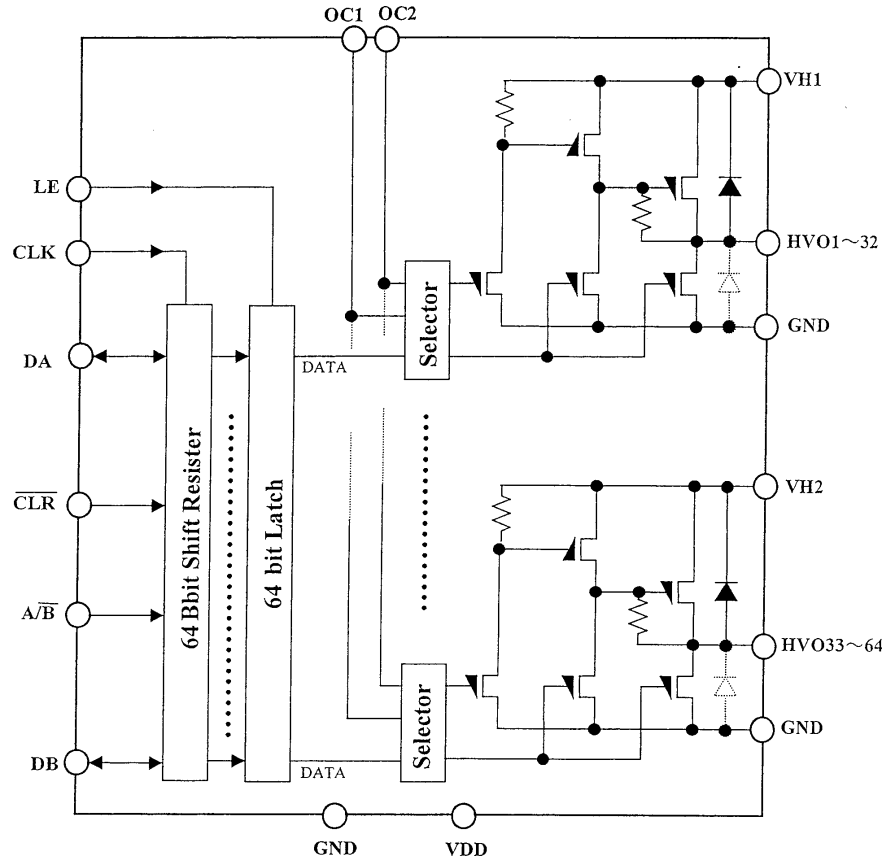
■ SN755860PJ (SCAN A ASSY : IC6201 - IC6206)  
SN755860PJ (SCAN B ASSY : IC6001 - IC6006)

- Scan IC
- Pin Assignment (Top view)





● Block Diagram



● Pin Function

Name	Pin No.	I/O	Num.	Function
CLK	39	I	1	Shift clock (start edge partial response)
DA	44	I/O	1	The serial data input of shifting register
DB	37	I/O	1	The serial data output of shifting register
LE	40	I	1	It output data done a latch of by "L" level.
A/ $\bar{B}$	36	I	1	A shift directional control signal of shift register
$\bar{CLR}$	45	I	1	It do data of shift register with "L" by "L" level.
OC1	42	I	1	An output control terminal of HVO
OC2	43	I	1	An output control terminal of HVO
HVO	1~30, 51~82, 99, 100	O	64	High voltage drive output (HV01-HV064)
VDD	41	-	1	Logic power supply
GND	34, 35, 38, 46, 47, 87~89, 91~94	-	12	Standard potential. This is common to HV01-HV064.
VH1	84, 85, 49, 50	-	4	The high potential circuit power supply which is common to HV01-HV032
VH2	31, 32, 96, 97	-	4	The high potential circuit power supply which is common to HV033-HV064
NC	33, 48, 95, 83, 86, 90, 98	-	7	It is the insulation electrically

# PDP-503CMX, PDP-503MXE, PDA-5002

## ■ M30624FGAFP (RGB ASSY : IC5505)

### • Main Microcomputer

### • Pin Function

No.	Pin Name	Function
1	TXD	Serial 3 line data output
2	CLK	Serial 3 line clock
3	FAN	FAN control
4	VOL	Audio VOL control
5	H_SYNC	Horizontal synchronizing signal input for signal distinction
6	V_SYNC	Vertical synchronizing signal input for signal distinction
7	DPMS	SYNC select for power management
8	BYTE	GND
9	CNVSS	Power supply in flash writing, STB +5V
10	NC	Non connection
11	XCONT (Not used)	GND
12	RST	Reset input
13	XOUT	Main clock output
14	VSS	GND
15	XIN	Main clock input
16	VCC	5V standby power
17	Not used	Pull-up
18	REM	Remote control signal input
19	REQ_MD	Communication request from the module microcomputer
20	KEY_SCAN	Key data input
21	WP SW	E2PROM write permission for Plug &Play
22	SLOT_ST2	Inside / outside product distinction of SLOT
23	FUNC1	Outside product SLOT function output 1
24	FUNC2	Outside product SLOT function output 2
25	NC	Non connection
26	NC	
27	NC	
28	NC	
29	SCL	Clock output for IICbus
30	SDA	Data input/output for IICbus
31	TXD1	Data output (flash writing / external equipment communication)
32	RXD1	Data input (flash writing / external equipment communication)
33	CLK1	Clock for flash writing
34	BUSY1	Busy for flash writing
35	TXD0	Data output for communication with the module microcomputer
36	RXD0	Data input for communication with the module microcomputer
37	LED_G	Green LED lighting
38	LED_R	Red LED lighting
39	NC	Non connection
40	IN1DET	INPUT1 input detection
41	EPM	EPM input for flash writing
42	AUDIO_NG	Audio NG detection
43	NC	Non connection
44	NC	
45	OSD_CE	Enable for OSD
46	CE	CE input for flash writing (pull-up)
47	WU_CE	Enable for waide microcomputer
48	FAN_NG	NG detection for fan
49	IN5DET	Video signal input detection
50	CB_MUTE	Combination mute

No.	Pin Name	Function
51	FR_SEL	Output free running in the video signal no input
52	RGB_SEL	Input switch of INPUT1 (Dsub15) / INPUT2 (BNC)
53	POWER	POWER ON/OFF output
54	BUSY	Busy input from the microcomputer
55	BUSY30	Busy input from IC30
56	IN3DET	INPUT3 input detection
57	IN4DET	INPUT4 input detection
58	ACL_SW	Switch the peak ACL function
59	NC	Non connection
60	PNL_MUTE	Panel drive stop
61	NC	Non connection
62	VCC	5V standby power
63	I_DET	I/P distinction signal (extra)
64	VSS	GND
65	NC	Non connection
66	DIN_SEL	Digital input switch trigger (IC102 side)
67	SDIN_SEL	Digital input switch trigger (DVI input side)
68	FWE	Enable for flash writing of the wide microcomputer
69	MD2	Mode setting for flash writing of the wide microcomputer
70	RST_WU	Reset the wide microcomputer
71	WE_WU	Flash writing permission output for wide microcomputer
72	WE_MD	Flash writing permission output for module
73	NC	Non connection
74	REQ_WU	Communication request from the wide microcomputer
75	RST2	Reset detection of wide microcomputer system 3.3V power supply
76	EXT_INT	Input signal switch
77	A_MUTE1	Audio mute 1
78	A_MUTE2	Audio mute 2
79	H_POL	H.SYNC polarity distinction
80	V_POL	V.SYNC polarity distinction
81	(E)SCL	I2C-BUS clock of E2PROM exclusive use
82	(E)SDA	I2C-BUS data of E2PROM exclusive use
83	EEPRST	E2PROM reset
84	FIX_VAR	AUDIO output signal switch (fixing, variable)
85	SYNC_ST	Presence distinction input of SYNC
86	NC	Non connection
87	NC	
88	SIGRST	Trigger for synchronous processing time shortening
89	NC	Non connection
90	PLD_CE	Enable for SYNC control PLD
91	NC	Non connection
92	NC	
93	SLOT_ST	A/D input for model distinction
94	TEMP3	A/D input for temperature sensor 3
95	TEMP2	A/D input for temperature sensor 2
96	AVSS	GND for AD conversion (GND connection)
97	PM_ST	Pull-up
98	VREF	AD conversion reference voltage
99	AVCC	Power supply for AD conversion
100	RXD	Serial 3 line data input

## ■ HD64F2328VF (RGB ASSY : IC5601)

- Wide Microcomputer

### ●Pin Function

No.	Pin Name	Function
1	NC	Non connection
2	Not used	PU
3	VSS	GND
4	NC	Non connection
5	VCC	3.3V power supply
6	UA0	Address bus 0 with each IC
7	UA1	Address bus
8	UA2	
9	UA3	
10	VSS	GND
11	UA4	Address bus
12	UA5	
13	UA6	
14	UA7	
15	UA8	
16	UA9	
17	UA10	
18	UA11	
19	VSS	GND
20	UA12	Address bus
21	UA13	
22	UA14	
23	UA15	Address bus for external flash memory
24	UA16	
25	UA17	
26	UA18	
27	UA19	
28	VSS	GND
29	WU_CE	Main microcomputer communication enable
30	NC	Non connection
31	VI	Vertical synchronization interrupt input
32	VACT_FRC	Vact interrupt input after frame rate conversion
33	DE_W	DE interrupt for start line detection of panel link input V
34	VD_W	Vertical synchronization interrupts before FRC
35	VSS	GND
36	VSS	
37	VACT_IP	Histogram acquisition interrupt input
38	FILM_IP	Acquisition interrupt input of film information
39	VCC	3.3V power supply
40	UD0	Data bus
41	UD1	
42	UD2	
43	UD3	
44	VSS	GND
45	UD4	Data bus

No.	Pin Name	Function
46	UD5	Data bus
47	UD6	
48	UD7	
49	UD8	
50	UD9	
51	UD10	
52	UD11	Data bus
53	VSS	
54	UD12	
55	UD13	
56	UD14	3.3V power supply
57	UD15	
58	VCC	3.3V power supply
59	D_TXD	Communication data output to the main unit microcomputer
60	EXT_TXD	232C communication output to the external personal computer (FLASH2)
61	D_RXD	Communication data input from the main unit microcomputer
62	EXT_RXD	232C communication input from the external personal computer (FLASH2)
63	D_CLK	Communication clock input from the main unit microcomputer
64	D_BUSY	BUSY for the main unit microcomputer
65	VSS	GND
66	CS_30	Chip select output for IC30
67	VSS	GND
68	VSS	
69	CS_FLASH	Chip select output for 16M flash
70	A19_FLASH	Control output of 16M flash address A19
71	REQ_WU	Request for the main unit microcomputer
72	CE_W	DE for start line detection of panel link input V
73	VD_W	Vertical synchronization before FRC
74	NC	Non connection
75	NC	
76	NC	
77	NC	
78	NC	
79	SGLB_AD	Switching output of a clock and 1/2 clock
80	FWE	Writing enable signal input for built-in flash memory
81	RESET	Reset input from the main unit microcomputer and reset IC
82	Not used	Pull-up
83	Not used	
84	VCC	3.3V power supply
85	XTAL	Connect a ceramic resonator (25MHz)
86	EXTAL	
87	VCC	3.3V power supply
88	PHAI	System clock output
89	VCC	3.3V power supply
90	SGLB_IP	Single input selecting output of IC102

# PDP-503CMX, PDP-503MXE, PDA-5002

No.	Pin Name	Function
91	RDB	Reading of external address space
92	HWRB	Upper rank data (D15 to D8) writing of external address space
93	PLL_CE	Chip enable signal output for AD/PLL
94	WAIT_IP	WAIT input for IC102
95	NC	Non connection
96	NC	
97	TXD_WU	Communication data output (AD/PLL)
98	NC	Non connection
99	VSS	GND
100	VSS	
101	SCK_WU	Communication clock input/output (AD/PLL)
102	WAIT_FLASH	WAIT input for external flash memory
103	AVCC	3.3V power supply
104	VREF	A/D and D/A reference voltage input
105	ULK_PLL	PLL unlock signal input
106	EXT_FILM	External film signal input
107	Not used	Pull-up
108	Not used	
109	ACL_PC	ACL input for PC (A/D input)
110	Not used	Pull-up
111	INa_30	NC
112	INb_30	
113	AVSS	GND
114	VSS	
115	NC	Non connection
116	NC	
117	HD_W	Horizontal sync. signal
118	FI	FILM mode detecting input
119	HI	Horizontal sync. count input
120	FDET_IP	System frequency detecting input
121	EMG_IP	IC102 forced hardware through output
122	IP_KILL	IC101 forced stop output
123	MD0	Wide microcomputer operation mode (mode 6 fixing) (0)
124	MD1	Wide microcomputer operation mode (mode 6 fixing) (1)
125	MD2	Wide microcomputer operation mode (mode 6 fixing) (2)
126	IC_RST	Reset signal input for ASIC
127	CS_102	Chip select output for IC102
128	CS_101	Chip select output for IC101

# **HD64F2328VF (DIGITAL VIDEO ASSY : IC1101)**

## **• Panel Microcomputer**

### **• Pin Function**

No.	Pin Name	Function
1	CS_23	PE5064 (IC 1703) control output
2	NC	NC terminal
3	VSS	GND
4	VSS	GND
5	VCC	3.3V power supply
6	UA0	Address bus
7	UA1	Address bus
8	UA2	Address bus
9	UA3	Address bus
10	VSS	Address bus
11	UA4	Address bus
12	UA5	Address bus
13	UA6	Address bus
14	UA7	Address bus
15	UA8	Address bus
16	UA9	Address bus
17	UA10	Address bus
18	UA11	Address bus
19	VSS	GND
20	UA12	Address bus
21	UA13	Address bus
22	UA14	Address bus
23	UA15	Address bus
24	UA16	Address bus
25	UA17	Address bus
26	UA18	Address bus
27	UA19	Address bus
28	VSS	GND
29	UA20	Address bus
30	PA5	NC terminal
31	PA6	NC terminal
32	PA7	NC terminal
33	CE_PN	Enables/ for panel microcomputer
34	CE_PN	Enables/ for panel microcomputer
35	VSS	GND
36	VSS	GND
37	APLP	The APL value acquisition trigger signal input.
38	VD_31	The V signal input from IC 1401 (PD 6358).
39	VCC	3.3V power supply
40	UD0	Data bus
41	UD1	Data bus
42	UD2	Data bus
43	UD3	Data bus
44	VSS	GND
45	UD4	Data bus
46	UD5	Data bus
47	UD6	Data bus
48	UD7	Data bus
49	UD8	Data bus
50	UD9	Data bus

# PDP-503CMX, PDP-503MXE, PDA-5002

No.	Pin Name	Function
51	UD10	Data bus
52	UD11	Data bus
53	VSS	GND
54	UD12	Data bus
55	UD13	Data bus
56	UD14	Data bus
57	UD15	Data bus
58	VCC	3.3V power supply
59	D_TXD	Communication with IC 1207 (a module microcomputer).
60	EXT_TXD	Communication with the outside (program notes).
61	D_RXD	Communication with IC 1207 (a module microcomputer).
62	EXT_RXD	Communication with the outside (program notes).
63	D_CLK	Communication with IC 1207 (a module microcomputer).
64	P60	NC terminal
65	VSS	GND
66	CS_FLASH	A flash memory control terminal
67	VSS	GND
68	VSS	GND
69	P61	NC terminal
70	UDREQ	IC 1703 (PE5064) control terminal
71	P63	NC terminal
72	WE_FLASH	A flash memory note control signal (unused).
73	BUSY	The command receipt of a message lye Norwich output
74	REQ_PU	A communication demand to a module microcomputer.
75	SEL23B	IC 1703 (PE5064) control terminal
76	CLRB	IC 1703 (PE5064) control terminal
77	FR_SEL	The free LAN select signal output
78	RST31B	The reset output to IC1301, IC1401(PD6358)
79	RST23B	The reset output to IC 1703 (PE5064)
80	FWE	Microcomputer program note control signal
81	RESET	Reset input
82	NMI	The at the rate of tang input (unuse)
83	STBY	The hardware standby input (unused)
84	VCC	3.3V power supply
85	XTAL	A clock oscillation child connection terminal
86	EXTAL	A clock oscillation child connection terminal
87	VSS	GND
88	PF7	NC terminal
89	VCC	3.3V power supply
90	PF6	NC terminal
91	RDB	A read control terminal from an outside slave device
92	HWRB	A wright control terminal to an outside slave device
93	PF3	NC terminal
94	PF2	NC terminal
95	PF1	NC terminal
96	PF0	NC terminal
97	P50	NC terminal
98	P51	NC terminal
99	VSS	GND
100	VSS	GND

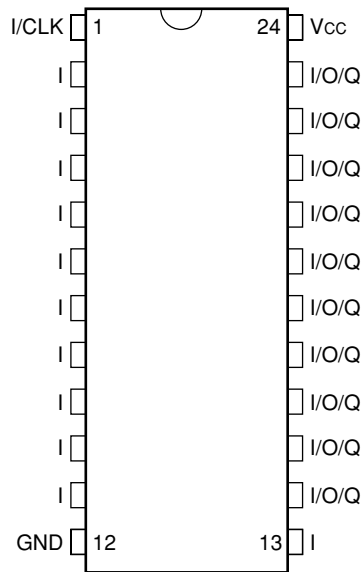


No.	Pin Name	Function
101	P52	NC terminal
102	P53	NC terminal
103	AVCC	3.3V power supply
104	VREF	A/D, D/A reference voltage input (unused)
105	STOPB	The drive control input from IC 1703 (PE5064)
106	P41	NC terminal
107	RYBY	The flash memory note ready input
108	ADR_K_EMG_L1	The emergency input from panel bottom address resonance block.
109	ADR_K_EMG_U1	The emergency input from panel upper part address resonance block
110	ADR_K_EMG_L2	The emergency input from panel bottom address resonance block. (unused)
111	ADR_K_EMG_U2	The emergency input from panel upper part address resonance block(unused)
112	P47	NC terminal
113	AVSS	GND
114	VSS	GND
115	MUTE_ADR	The panel mute signal output
116	MUTE_SUS	The XY drive mute signal output (unused)
117	P15	NC terminal
118	HD	The HD signal input from outside ASSY (RGB ASSY, etc)
119	P13	NC terminal
120	P12	NC terminal
121	PC_VIDEO	The PC/Video identification output
122	VD	The VD signal input from outside ASSY (RGB ASSY, etc)
123	MD0	The microcomputer mode of operation select signal input
124	MD1	The microcomputer mode of operation select signal input
125	MD2	The microcomputer mode of operation select signal input
126	PG0	NC terminal
127	CS_31Y	IC1301, IC1401(PD 6358) control terminal
128	CS_31X	IC1301, IC1401(PD 6358) control terminal

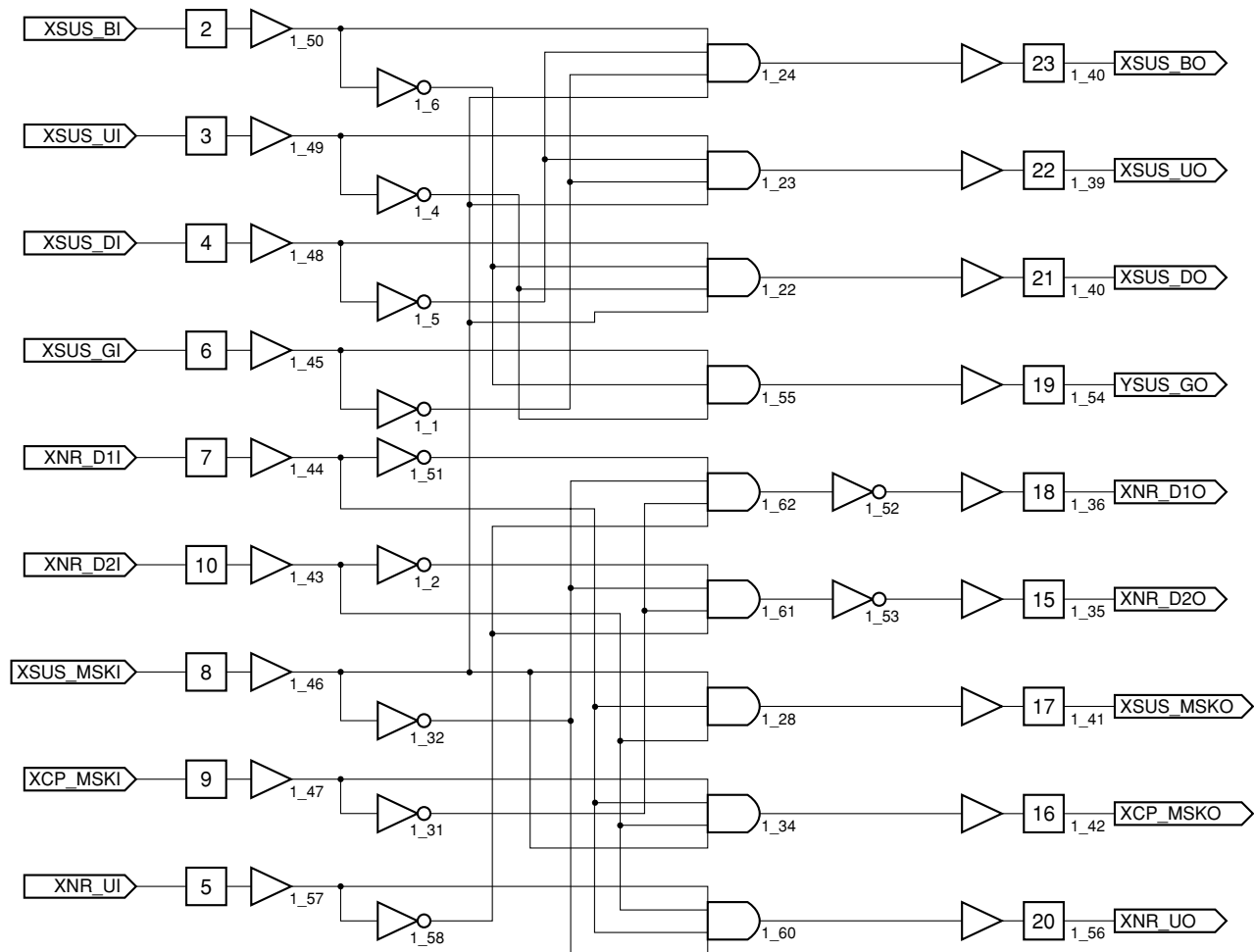
## ■ GAL22V10 (X DRIVE ASSY : IC2006)

- Drive Protect PLD

### • Pin Assignment (Top View)

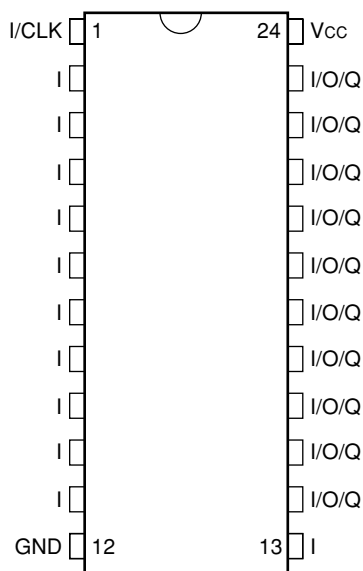


### • Block Diagram

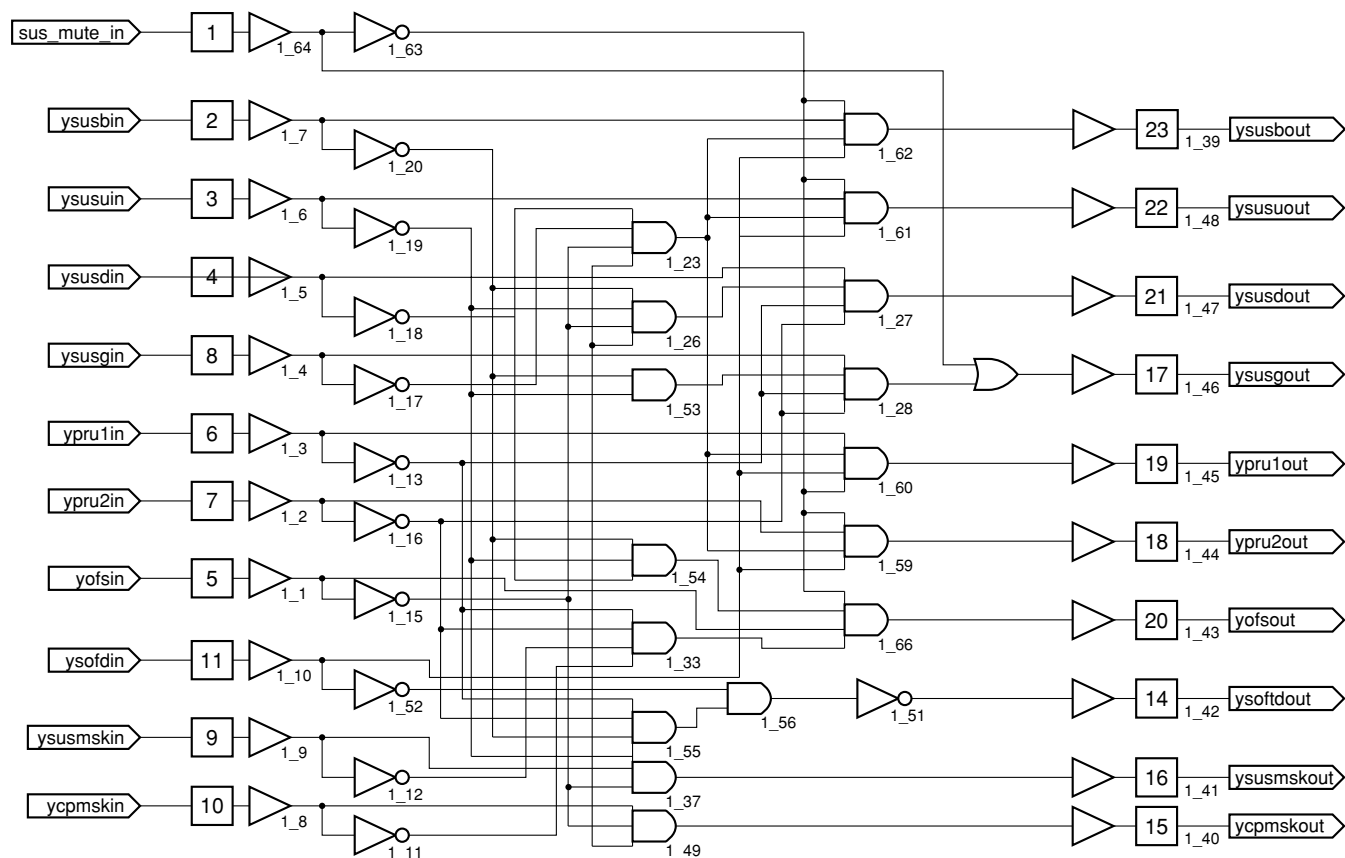


## ■ GAL22V10 (Y DRIVE ASSY : IC3003)

- Drive Protect PLD
- Pin Assignment (Top View)



## • Block Diagram



# PDP-503CMX, PDP-503MXE, PDA-5002

## ■ M30624FGAFP (DIGITAL VIDEO ASSY : IC1207)

### • Module Microcomputer

### • Pin Function

No.	Pin Name	Function
1	TXD	Serial 3 line data output for communication with a panel microcomputer
2	CLK	Serial 3 line clock for communication with a panel microcomputer
3	NC	NC terminal
4	NC	NC terminal
5	NC	NC terminal
6	NC	NC terminal
7	NC	NC terminal
8	BYTE	The external data bus width reshuffling input (I am unused and connect GND)
9	CNVSS	A power supply for program note (a note, 5V, usually, pull-down
10	XCIN	NC terminal
11	XCOUT	NC terminal
12	RESET	A reset input terminal
13	XOUT	Clock output terminal
14	VSS	GND
15	XIN	Clock input terminal
16	VCC	5V standby power
17	NMI	Because a NMI interruption terminal is unused, It handle pull up.
18	REM	The SR signal input
19	REQ_PU	A communication demand from a panel microcomputer (the pulse meter acquisition)
20	/SW_TRG	Main switch OFF / ON search
21	NC	NC terminal
22	NC	NC terminal
23	NC	NC terminal
24	AC_OFF	AC power OFF search and power supply ASSY differentiation.
25	PD_TRIGGER	Power down search
26	NC	NC terminal
27	NC	NC terminal
28	NC	NC terminal
29	SCL	EEPROM, IIC communication with power supply ASSY
30	SDA	EEPROM, IIC communication with power supply ASSY
31	TXD1	Communication with the outside (a program note)
32	RXD1	Communication with the outside (a program note)
33	CLK1	Communication with the outside (a program note)
34	BUSY1	Communication with the outside (a program note)
35	TXD0	Communication with outside ASSY (microcomputers main in RGB ASSY, etc)
36	RXD0	Communication with outside ASSY (microcomputers main in RGB ASSY, etc)
37	NC	NC terminal
38	REQ_MD/A_MUTE	232C communication demand (a request to a main microcomputer) / audio system mute
39	NC	NC terminal
40	NC	NC terminal
41	EPM	The EPM input for program note (L fixation)
42	NC	NC terminal
43	PU_CE	Enables/ for panel microcomputer
44	NC	NC terminal
45	MOD_SW/A_NG	The model of machines distinction input / audio system NG input
46	CE	The CE input for program note (H fixation)
47	DITHER/SW_STC	Power supply search of a dither setting / media receiver for module
48	NC	NC terminal
49	/SW_STP	Power supply search of a panel
50	NC	NC terminal

No.	Pin Name	Function
51	NC	NC terminal
52	RELAY	The output for power supply ON / OFF change
53	POWER/MSTATE	Input / SII861 master information for power supply ON / OFF change
54	NC	NC terminal
55	WE_PN	Buffer state control for panel microcomputer note
56	MD0	The panel microcomputer mode of operation change output
57	MD2	The panel microcomputer mode of operation change output
58	FWE	The panel microcomputer program note control signal output
59	RST_PU	The panel microcomputer reset output
60	PN_MUTE	The panel mute input
61	NC	NC terminal
62	VCC	5V standby power
63	NC	NC terminal
64	VSS	GND
65	NC	NC terminal
66	NC	NC terminal
67	/A_SCL	IIC clock for audio system
68	/A_SDA	IIC data for audio system
69	APD_MUTE	A mute signal of address series
70	ADR_K_PD	The address oscillatory system PD input
71	ADR_PD	The address series PD input
72	DCC_PD	The power supply system PD input
73	NC	NC terminal
74	NC	NC terminal
75	RST2	Panel microcomputer reset search
76	NC	NC terminal
77	/DDC_SCL	IIC communication with a media receiver
78	/DDC_SDA	IIC communication with a media receiver
79	NC	NC terminal
80	NC	NC terminal
81	DEW_DET	The dew condensation sensor input
82	NC	NC terminal
83	NC	NC terminal
84	NC	NC terminal
85	NC	NC terminal
86	LED_G	Green LED lighting (LED on interface ASSY in a panel module)
87	LED_R	Red LED lighting (LED on interface ASSY in a panel module)
88	NC	NC terminal
89	BUSY	Communication permission / inhibiting signal from a panel microcomputer
90	NC	NC terminal
91	NC	NC terminal
92	/F_KEY1	The front KEY input
93	MAX_PLS2/F_KEY2	The terminal / front KEY input for brightness setting mode of operation change
94	TEMP1	The A/D input for temperature sensor
95	MAX_PLS? /CCKM	Terminal / connection search for brightness setting mode of operation change
96	AVSS	GND for AD conversion
97	PM_ST	The A/D input for model of machines distinction
98	VREF	Reference voltage for AD conversion
99	AVCC	5V standby power for AD conversion
100	RXD	Serial 3 line data entry for communication with a panel microcomputer

**■ PD6358A (DIGITAL VIDEO ASSY : IC1301)**

• Picture Improved IC

● Pin Function

No.	Pin Name	Function
1	VSS	GND
2	TESTO6	Test output terminal (unused)
3	OSDCLK	The CLK input for OSD
4	TTST	Test input terminal (unused)
5	VDDI	2.5V power supply
6	OVDDE-01	3.3V power supply
7	AGO0	Address data output (G signal)
8	VDDI	2.5V power supply
9	AGO2	Address data output (G signal)
10	AGO3	Address data output (G signal)
11	AGO4	Address data output (G signal)
12	VDDI	2.5V power supply
13	ARO6	Address data output (R signal)
14	AGO7	Address data output (G signal)
15	VDDI	2.5V power supply
16	ARO9	Address data output (R signal)
17	ABO9	Address data output (B signal)
18	VDDI	2.5V power supply
19	ADRCLKO2	The address CLK output (for panel upper part)
20	ARO12	Address data output (R signal)
21	ARO13	Address data output (R signal)
22	AGO14	Address data output (G signal)
23	AGO15	Address data output (G signal)
24	ARO16	Address data output (R signal)
25	ARO17	Address data output (R signal)
26	VSS	GND
27	ABO17	Address data output (B signal)
28	AGO17	Address data output (G signal)
29	AGO18	Address data output (G signal)
30	ABO19	Address data output (B signal)
31	UDAT15	Microcomputer data bus
32	UDAT12	Microcomputer data bus
33	UDAT9	Microcomputer data bus
34	UDAT5	Microcomputer data bus
35	OVDDE-06	3.3V power supply
36	APLP	APL value output trigger signal
37	OVDDE-08	3.3V power supply
38	CS5BI	The chip select input
39	CS4BI	The chip select input
40	UADRI13	Microcomputer address bus
41	UADRI9	Microcomputer address bus
42	UADRI6	Microcomputer address bus
43	UADRI2	Microcomputer address bus
44	UADRI1	Microcomputer address bus
45	TESTI2	Test input terminal (unused)
46	BIT0	The subfield No output (the 0 bit)
47	OVDDE-11	3.3V power supply
48	TESTO4	Test output terminal (unused)
49	ARO39	Address data output (G signal)
50	AGO38	Address data output (G signal)

No.	Pin Name	Function
51	VSS	GND
52	ABO37	Address data output (B signal)
53	ABO36	Address data output (B signal)
54	ARO36	Address data output (R signal)
55	ABO34	Address data output (B signal)
56	ADRCLKO4	The address CLK output (for panel bottom part)
57	AGO33	Address data output (G signal)
58	AGO32	Address data output (G signal)
59	AGO31	Address data output (G signal)
60	AGO30	Address data output (G signal)
61	AGO29	Address data output (G signal)
62	VDDI	2.5V power supply
63	ABO27	Address data output (B signal)
64	AGO26	Address data output (G signal)
65	VDDI	2.5V power supply
66	AGO24	Address data output (G signal)
67	VDDI	2.5V power supply
68	ABO22	Address data output (B signal)
69	VDDI	2.5V power supply
70	ARO21	Address data output (R signal)
71	ARO20	Address data output (R signal)
72	VDDI	2.5V power supply
73	OVDDE-14	3.3V power supply
74	TDI	The JTAG input
75	RBI9	The R picture B aspect signal input (the ninth bit)
76	VSS	GND
77	RBI8	The R picture B aspect signal input (the eighth bit)
78	RBI6	The R picture B aspect signal input (the sixth bit)
79	RBI4	The R picture B aspect signal input (the fourth bit)
80	OVSS-09	GND
81	RSTB	Reset input
82	GBI8	The G picture B aspect signal input (the eighth bit)
83	OVDDE-18	3.3V power supply
84	GBI5	The G picture B aspect signal input (the fifth bit)
85	GBI2	The G picture B aspect signal input (the second bit)
86	DEI	DE signal input
87	BBI6	The B picture B aspect signal input (the sixth bit)
88	BBI3	The B picture B aspect signal input (the third bit)
89	VDI	VD signal input
90	HDI	HD signal input
91	RAI6	The R picture A aspect signal input (the sixth bit)
92	RAI2	The R picture A aspect signal input (the second bit)
93	TESTI0	Test input terminal (unused)
94	OVSS-11	GND
95	GAI7	The G picture A aspect signal input (the seventh bit)
96	GAI3	The G picture A aspect signal input (the third bit)
97	GAI0	The G picture A aspect signal input (the 0 bit)
98	BAI6	The B picture A aspect signal input (the sixth bit)
99	BAI3	The B picture A aspect signal input (the third bit)
100	BAI0	The B picture A aspect signal input (the 0 bit)

# PDP-503CMX, PDP-503MXE, PDA-5002

No.	Pin Name	Function
101	TESTO7	Test output terminal (unused)
102	TESTO5	Test output terminal (unused)
103	OSDH	OSDH input
104	BLK	OSDBLK input
105	OSDB	OSDB signal input
106	NC	NC terminal
107	ARO1	Address data output (R signal)
108	ARO2	Address data output (R signal)
109	ARO3	Address data output (R signal)
110	ARO4	Address data output (R signal)
111	ARO5	Address data output (R signal)
112	ABO5	Address data output (B signal)
113	ARO7	Address data output (R signal)
114	ARO8	Address data output (R signal)
115	ABO8	Address data output (B signal)
116	AGO9	Address data output (G signal)
117	AGO10	Address data output (G signal)
118	ADRCLKO1	Address CLK output (for panel upper part)
119	ABO11	Address data output (B signal)
120	ABO12	Address data output (B signal)
121	ARO14	Address data output (R signal)
122	ARO15	Address data output (R signal)
123	ABO15	Address data output (B signal)
124	ABO16	Address data output (B signal)
125	AGO16	Address data output (G signal)
126	ARO18	Address data output (R signal)
127	AGO19	Address data output (G signal)
128	OVDDE-05	3.3V power supply
129	UDAT13	Microcomputer data bus
130	UDAT10	Microcomputer data bus
131	UDAT6	Microcomputer data bus
132	UDAT3	Microcomputer data bus
133	UDAT0	Microcomputer data bus
134	OVDDE-07	3.3V power supply
135	LR	The panel LR select input
136	RDBI	Microcomputer read control terminal
137	CLKSEL	CLK select input
138	UADRI10	Microcomputer address bus
139	UADRI7	Microcomputer address bus
140	UADRI3	Microcomputer address bus
141	CYCLEB	Address data output control signal
142	BIT2	Subfield No. output (the second bit)
143	SFSTB	Address data output control signal
144	OVSS-05	GND
145	TESTO2	Test output terminal (unused)
146	ABO38	Address data output (B signal)
147	ARO38	Address data output (R signal)
148	ARO37	Address data output (R signal)
149	AGO36	Address data output (G signal)
150	ARO35	Address data output (R signal)



No.	Pin Name	Function
151	ADRCLKO3	The address CLK output (for panel bottom part)
152	ABO33	Address data output (B signal)
153	ABO32	Address data output (B signal)
154	VDDI	2.5V power supply
155	ABO30	Address data output (B signal)
156	VDDI	2.5V power supply
157	ABO28	Address data output (B signal)
158	ARO28	Address data output (R signal)
159	ABO26	Address data output (B signal)
160	ABO25	Address data output (B signal)
161	ABO24	Address data output (B signal)
162	ARO24	Address data output (R signal)
163	ARO23	Address data output (R signal)
164	ARO22	Address data output (R signal)
165	AGO21	Address data output (G signal)
166	AGO20	Address data output (G signal)
167	TDO	JTAG signal
168	TMS	JTAG signal
169	RBI7	The R picture B aspect signal input (the seventh bit)
170	TCK	JTAG signal
171	RBI5	The R picture B aspect signal input (the fifth bit)
172	RBI3	The R picture B aspect signal input (the third bit)
173	RBI1	The R picture B aspect signal input (the first bit)
174	OVDDE-16	3.3V power supply
175	GBI7	The G picture B aspect signal input (the seventh bit)
176	OVSS-10	GND
177	GBI4	The G picture B aspect signal input (the fourth bit)
178	GBI1	The G picture B aspect signal input (the first bit)
179	BBI9	The B picture B aspect signal input (the ninth bit)
180	BBI5	The B picture B aspect signal input (the fifth bit)
181	BBI2	The B picture B aspect signal input (the second bit)
182	RAI9	The R picture A aspect signal input (the ninth bit)
183	CLK3	CLK input terminal (unused)
184	RAI5	The R picture A aspect signal input (the fifth bit)
185	RAI1	The R picture A aspect signal input (the first bit)
186	TESTI1	Test input terminal (unused)
187	GAI9	The G picture A aspect signal input (the ninth bit)
188	GAI6	The G picture A aspect signal input (the sixth bit)
189	GAI2	The G picture A aspect signal input (the second bit)
190	BAI9	The B picture A aspect signal input (the ninth bit)
191	BAI5	The B picture A aspect signal input (the fifth bit)
192	BAI2	The B picture A aspect signal input (the second bit)
193	BAI1	The B picture A aspect signal input (the first bit)
194	OVSS-01	GND
195	OVSS-02	GND
196	OSDG	OSDG signal input
197	ARO0	Address data output (R signal)
198	ABO0	Address data output (B signal)
199	ABO1	Address data output (B signal)
200	ABO2	Address data output (B signal)

# PDP-503CMX, PDP-503MXE, PDA-5002

No.	Pin Name	Function
201	ABO3	Address data output (B signal)
202	ABO4	Address data output (B signal)
203	OVDDE-02	3.3V power supply
204	ABO6	Address data output (B signal)
205	ABO7	Address data output (B signal)
206	VDDI	2.5V power supply
207	OVDDE-03	3.3V power supply
208	ARO10	Address data output (R signal)
209	ABO10	Address data output (B signal)
210	AGO11	Address data output (G signal)
211	AGO12	Address data output (G signal)
212	ABO13	Address data output (B signal)
213	ABO14	Address data output (B signal)
214	OVDDE-04	3.3V power supply
215	OVSS-03	GND
216	ARO19	Address data output (R signal)
217	TESTO1	Test output terminal (unused)
218	UDAT14	Microcomputer data bus
219	UDAT11	Microcomputer data bus
220	UDAT7	Microcomputer data bus
221	UDAT4	Microcomputer data bus
222	UDAT1	Microcomputer data bus
223	VDRD	V signal output
224	HWRBI	Microcomputer wright control terminal
225	UADRI14	Microcomputer address bus
226	OVDDE-09	3.3V power supply
227	UADRI11	Microcomputer address bus
228	UADRI8	Microcomputer address bus
229	UADRI4	Microcomputer address bus
230	BIT3	Subfield No. output (the third bit)
231	BIT1	Subfield No. output (the first bit)
232	OVDDE-10	3.3V power supply
233	TESTO3	Test output terminal (unused)
234	ABO39	Address data output (B signal)
235	AGO37	Address data output (G signal)
236	OVSS-06	GND
237	AGO35	Address data output (G signal)
238	ADRCLKO5	Address CLK output (for panel bottom part)
239	ARO34	Address data output (R signal)
240	ARO33	Address data output (R signal)
241	ABO31	Address data output (B signal)
242	ARO31	Address data output (R signal)
243	ABO29	Address data output (B signal)
244	ARO29	Address data output (R signal)
245	OVDDE-12	3.3V power supply
246	ARO27	Address data output (R signal)
247	ARO26	Address data output (R signal)
248	ARO25	Address data output (R signal)
249	OVDDE-13	3.3V power supply
250	AGO23	Address data output (G signal)

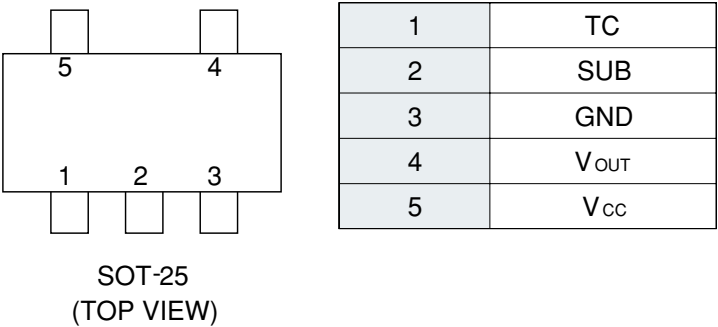
No.	Pin Name	Function
251	AGO22	Address data output (G signal)
252	VDDI	2.5V power supply
253	ABO20	Address data output (B signal)
254	OVSS-07	GND
255	OVDDE-15	3.3V power supply
256	OVSS-08	GND
257	RBI2	The R picture B aspect signal input (the second bit)
258	TRST	JTAG signal
259	GBI9	The G picture B aspect signal input (the ninth bit)
260	GBI6	The G picture B aspect signal input (the sixth bit)
261	OVDDE-17	3.3V power supply
262	GBI3	The G picture B aspect signal input (the third bit)
263	GBI0	The G picture B aspect signal input (the 0 bit)
264	BBI8	The B picture B aspect signal input (the eighth bit)
265	BBI4	The B picture B aspect signal input (the fourth bit)
266	BBI1	The B picture B aspect signal input (the first bit)
267	RAI8	The R picture A aspect signal input (the eighth bit)
268	OVDDE-19	3.3V power supply
269	RAI4	The R picture A aspect signal input (the fourth bit)
270	RAI0	The R picture A aspect signal input (the 0 bit)
271	FREERUN	The freerun control input
272	GAI8	The G picture A aspect signal input (the eighth bit)
273	GAI5	The G picture A aspect signal input (the fifth bit)
274	GAI1	The G picture A aspect signal input (the first bit)
275	BAI8	The B picture A aspect signal input (the eighth bit)
276	BAI4	The B picture A aspect signal input (the fourth bit)
277	VDDE	3.3V power supply
278	OSDV	OSDV input
279	VSS	GND
280	OSDR	OSDR signal input
281	VDDE	3.3V power supply
282	AGO1	Address data output (G signal)
283	VSS	GND
284	VDDI	2.5V power supply
285	VDDI	2.5V power supply
286	AGO5	Address data output (G signal)
287	AGO6	Address data output (G signal)
288	VDDI	2.5V power supply
289	AGO8	Address data output (G signal)
290	VSS	GND
291	ADRCLKO0	The address CLK output (for panel upper part)
292	VDDE	3.3V power supply
293	ARO11	Address data output (R signal)
294	VSS	GND
295	AGO13	Address data output (G signal)
296	VDDE	3.3V power supply
297	ABO18	Address data output (B signal)
298	VSS	GND
299	TESTO0	Test output terminal (unused)
300	VDDI	2.5V power supply

# PDP-503CMX, PDP-503MXE, PDA-5002

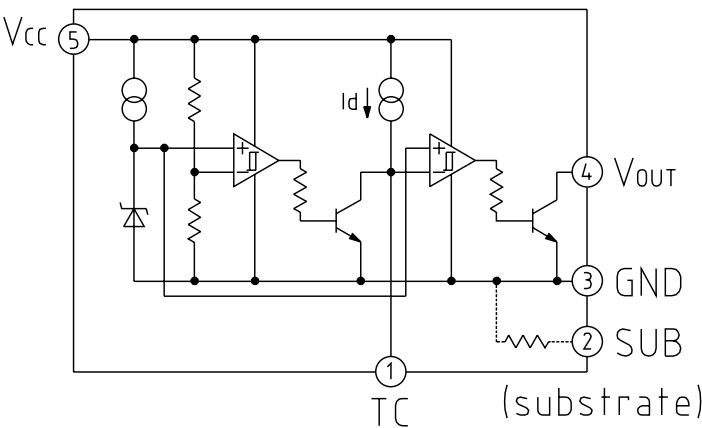
No.	Pin Name	Function
301	UDAT8	Microcomputer data bus
302	VSS	GND
303	UDAT2	Microcomputer data bus
304	VDDI	2.5V power supply
305	OVSS-04	GND
306	UADRI15	Microcomputer address bus
307	VDDI	2.5V power supply
308	UADRI12	Microcomputer address bus
309	VSS	GND
310	UADRI5	Microcomputer address bus
311	VDDI	2.5V power supply
312	NC	NC terminal
313	VSS	GND
314	AGO39	Address data output (G signal)
315	VDDE	3.3V power supply
316	ABO35	Address data output (B signal)
317	VSS	GND
318	AGO34	Address data output (G signal)
319	VDDE	3.3V power supply
320	ARO32	Address data output (R signal)
321	VSS	GND
322	ARO30	Address data output (R signal)
323	VDDI	2.5V power supply
324	AGO28	Address data output (G signal)
325	AGO27	Address data output (G signal)
326	NC	NC terminal
327	AGO25	Address data output (G signal)
328	VSS	GND
329	ABO23	Address data output (B signal)
330	VDDE	3.3V power supply
331	ABO21	Address data output (B signal)
332	VSS	GND
333	VPD	GND
334	VDDE	3.3V power supply
335	RBI0	The R picture B aspect signal input (the 0 bit)
336	VSS	GND
337	ACLK	CLK input (25MHz)
338	VDDI	2.5V power supply
339	CLK4	CLK input (50MHz)
340	VSS	GND
341	BBI7	The B picture B aspect signal input (the seventh bit)
342	VDDI	2.5V power supply
343	BBI0	The B picture B aspect signal input (the 0 bit)
344	RAI7	The R picture A aspect signal input (the seventh bit)
345	VDDI	2.5V power supply
346	RAI3	The R picture A aspect signal input (the third bit)
347	VSS	GND
348	CLK2	The image system CLK input
349	VDDI	2.5V power supply
350	GAI4	The G picture A aspect signal input (the fourth bit)
351	VSS	GND
352	BAI7	The B picture A aspect signal input (the seventh bit)

■ PST9246N (DIGITAL VIDEO ASSY : IC1208)

- Reset IC
- Pin Assignment (Top View)



• Block Diagram



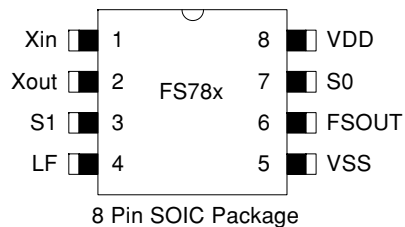
• Pin Function

Pin No.	Pin name	Functions
1	TC	T <sub>PLH</sub> control pin
2	SUB	Substrate pin
3	GND	GND pin
4	V <sub>OUT</sub>	Reset signal output pin
5	V <sub>CC</sub>	V <sub>CC</sub> pin/voltage detect pin

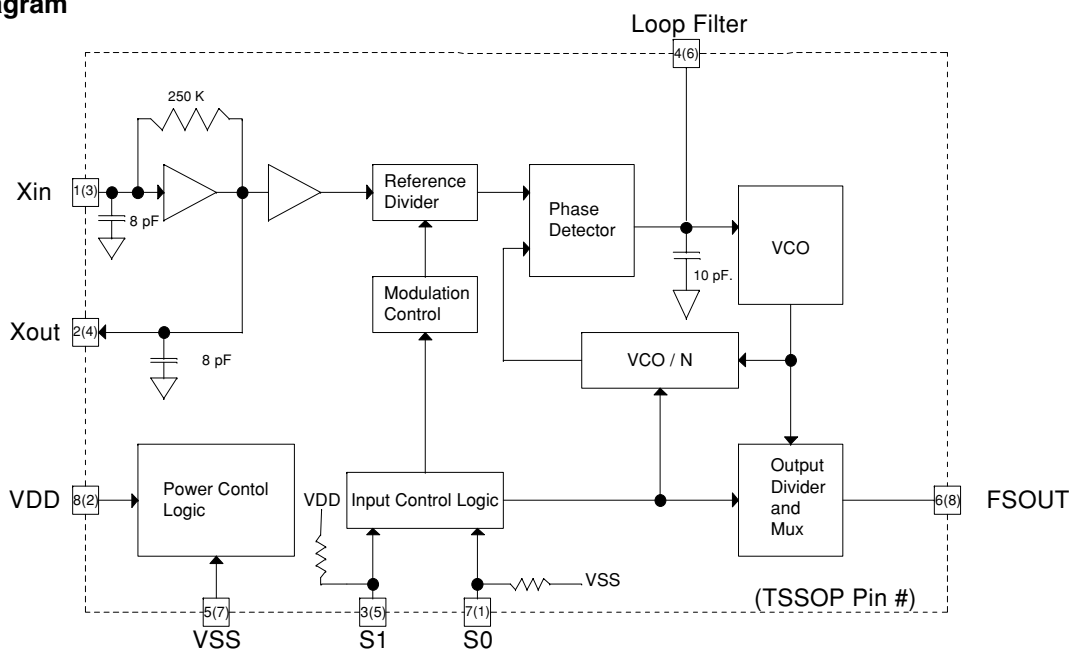
## FS781BZB (DIGITAL VIDEO ASSY : IC1802)

- Low EMI Clock IC

### • Pin Assignment (Top View)



### • Block Diagram



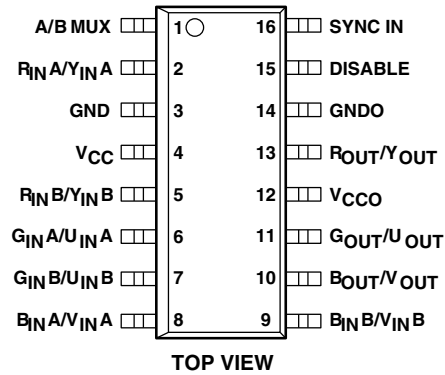
### • Pin Function

Pin No.	Pin Name	I/O	TYPE	Description
1/2	Xin / Xout	I/O	Analog	Pins form an on-chip reference oscillator when connected to terminals of an external parallel resonant crystal. Xin may be connected to TTL/CMOS external clock source. If Xin connected to external clock other than crystal, leave Xout (pin 2) unconnected.
7/3	S0 / S1	I	CMOS/TTL	Digital control inputs to select input frequency range and output frequency scaling. Refer to Tables 7 & 8 for selection. S0 has internal pulldown. S1 has internal pullup.
4	LF	I	Analog	Loop Filter. Single ended tri-state output of the phase detector. A two-pole passive loop filter is connected to Loop Filter (LF).
6	FSOUT	O	CMOS/TTL	Modulated Clock Frequency Output. The center frequency is the same as the input reference frequency for FS781. Input frequency is multiplied by 2x and 4x for FS782 and FS784 respectively.
8	VDD	P	Power	Positive Power Supply.
5	VSS	P	Power	Power Supply Ground

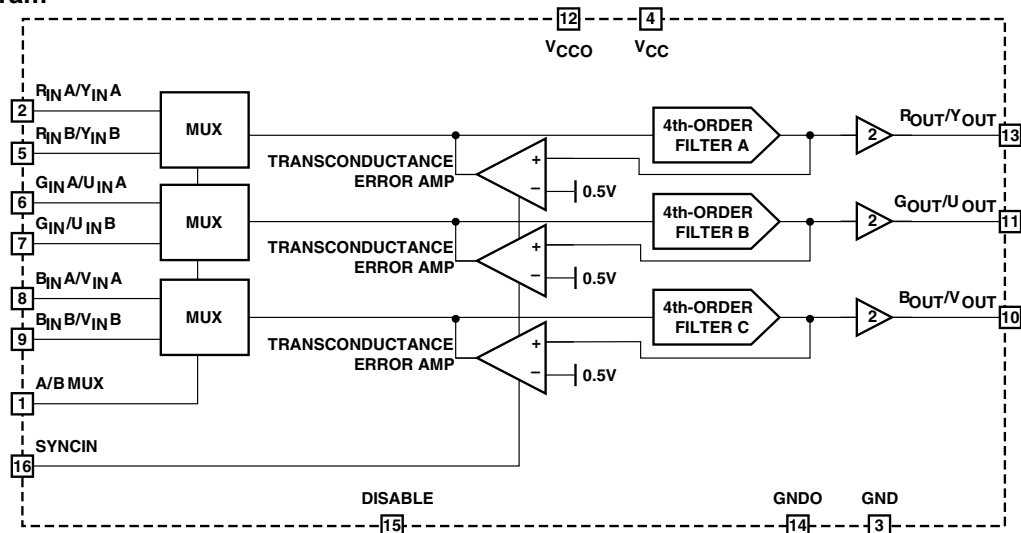
# **ML6426CS-1 (RGB ASSY : IC4403)**

• LPF IC

## • Pin Assignment (Top View)



## • Block Diagram



## • Pin Function

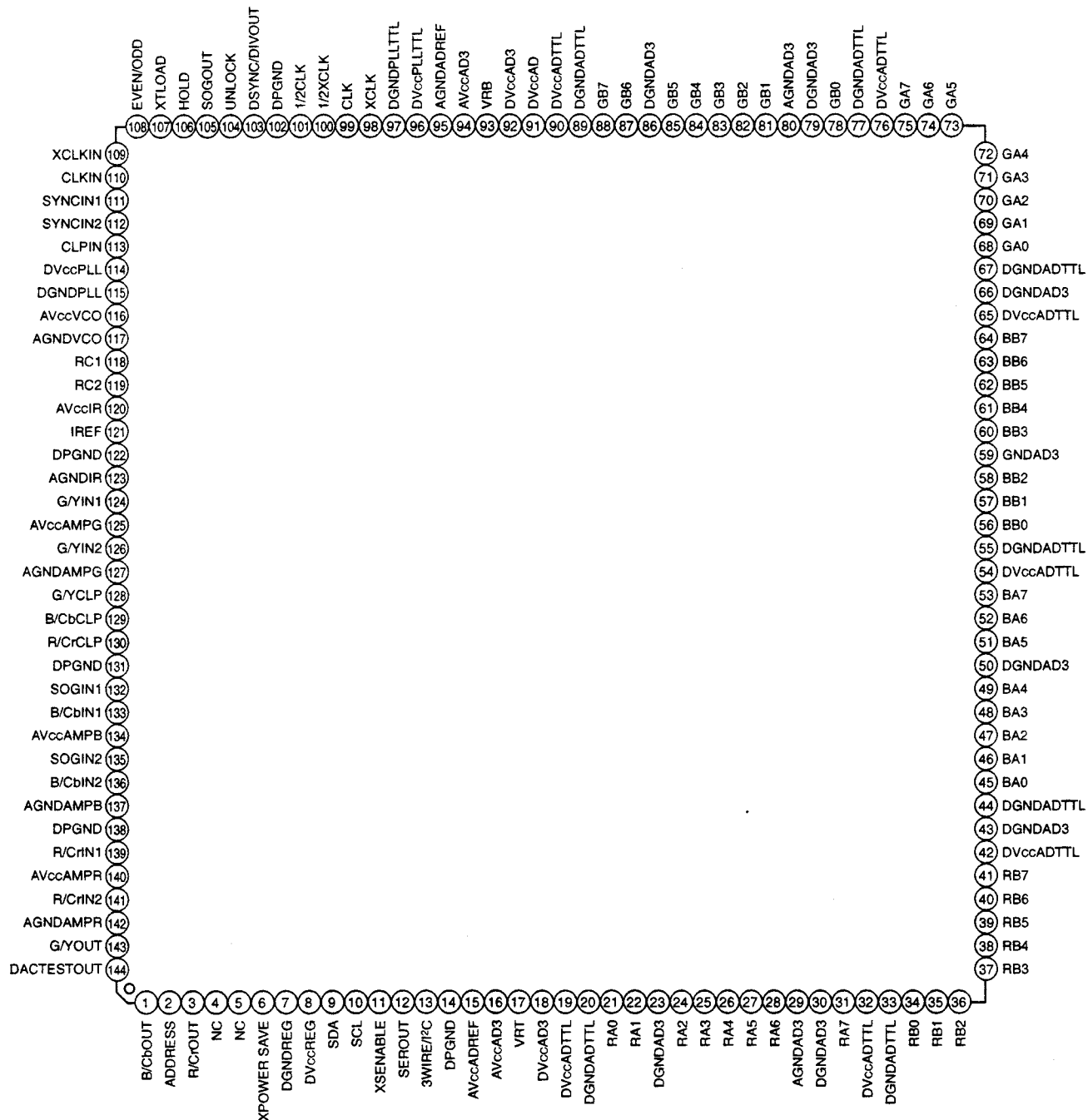
PIN	NAME	FUNCTION	PIN	NAME	FUNCTION
1	A/B MUX	Logic input pin to select between Bank <A> and Bank <B> video inputs. This pin is internally pulled high.	8	B <sub>IN</sub> A/V <sub>IN</sub> A	Unfiltered analog B- or V-channel input for Bank <A>. Sync must be provided at SYNC IN pin.
2	R <sub>IN</sub> A/Y <sub>IN</sub> A	Unfiltered analog R- or Y-channel input for Bank <A>. Sync must be provided at SYNC IN pin.	9	B <sub>IN</sub> B/V <sub>IN</sub> B	Unfiltered analog B- or V-channel input for Bank <B>. Sync must be provided at SYNC IN pin.
3	GND	Analog ground	10	B <sub>OUT</sub>	Analog B or V-channel output
4	V <sub>CC</sub>	Analog 5V supply	11	G <sub>OUT</sub>	Analog G or U-channel output
5	R <sub>IN</sub> B/Y <sub>IN</sub> B	Unfiltered analog R- or Y-channel input for Bank <B>. Sync must be provided at SYNC IN pin.	12	V <sub>CCO</sub>	5V power supply for output buffers
6	G <sub>IN</sub> A/U <sub>IN</sub> A	Unfiltered analog G- or U-channel input for Bank <A>. Sync must be provided at SYNC IN pin.	13	R <sub>OUT</sub>	Analog R or Y-channel output
7	G <sub>IN</sub> B/U <sub>IN</sub> B	Unfiltered analog G- or U-channel input for Bank <B>. Sync must be provided at SYNC IN pin.	14	GNDO	Analog ground
			15	DISABLE	Disable/Enable pin. Turns the chip off when logic high. Internally pulled low.
			16	SYNCIN	Input for an external H-sync logic signal for filter channels. CMOS level input. Active High.

# PDP-503CMX, PDP-503MXE, PDA-5002

## ■ CXA3516R (RGB ASSY : IC4603)

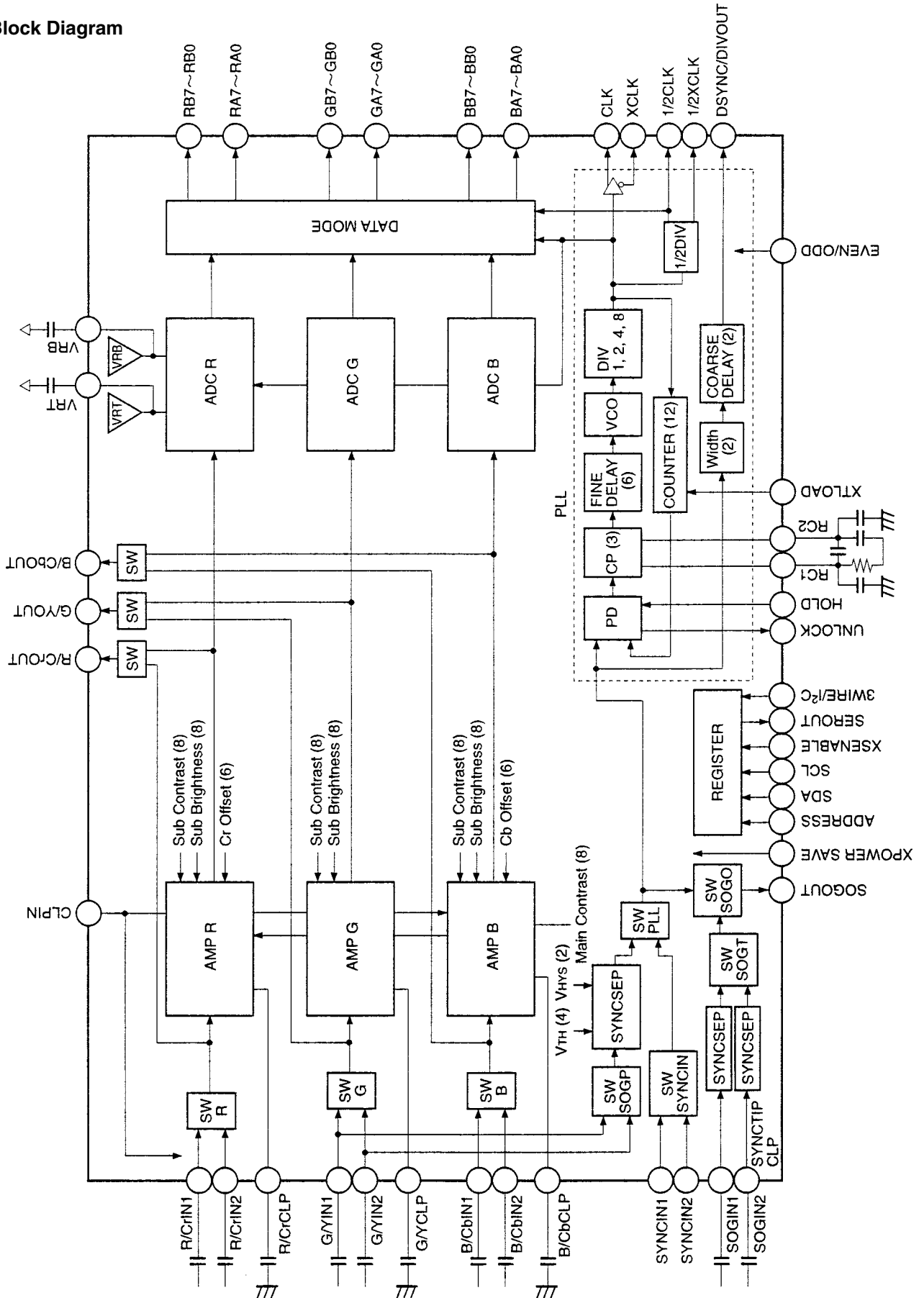
• AD + PLL IC

### ● Pin Assignment (Top View)





● Block Diagram



● **Pin Function**

Pin No.	Symbol	I/O	Typical signal	Description
1	B/CbOUT	O	1.83V	Amplifier output signal monitor
2	ADDRESS	I	—	I <sup>2</sup> C slave address setting
3	R/CrOUT	O	1.83V	Amplifier output signal monitor
4	NC	—	—	Not used
5	NC	—	—	Not used
6	XPOWER SAVE	I	TTL	Power save setting
7	DGNDREG	—	GND	Register GND
8	DVccREG	—	5V	Register power supply
9	SDA	I	—	Control register data input
10	SCL	I	—	Control register CLK input
11	XSENABLE	I	TTL	Enable signal input for 3-wire control register
12	SEROUT	O	TTL	3-wire control register data readout
13	3WIRE/I <sup>2</sup> C	I	—	Selection of input between I <sup>2</sup> C bus and 3-wire bus
15	AVccADREF	—	5V	Reference power supply for A/D converter
16, 94	AVccAD3	—	3.3V	Analog power supply for A/D converter
17	VRT	O	2.9V	Top reference voltage output for A/D converter
18, 92	DVccAD3	—	3.3V	Digital power supply for A/D converter
19, 32, 42, 54, 65, 76, 90	DVccADTTL	—	5V	TTL output power supply for A/D converter
20, 33, 44, 55, 67, 77, 89	DGNDADTTL	—	GND	TTL output GND for A/D converter
21, 22, 24 to 28, 31	RA0 to RA7	O	TTL	Data output for R-channel port A side
23, 30, 43, 50, 59, 66, 79, 86	DGNDAD3	—	GND	Digital GND for A/D converter
29, 80	AGNDAD3	—	GND	Analog GND for A/D converter
34 to 41	RB0 to RB7	O	TTL	Data output for R-channel port B side
45 to 49, 51 to 53	BA0 to BA7	O	TTL	Data output for B-channel port A side
56 to 58, 60 to 64	BB0 to BB7	O	TTL	Data output for B-channel port B side
68 to 75	GA0 to GA7	O	TTL	Data output for G-channel port A side
78, 81 to 85, 87, 88	GB0 to GB7	O	TTL	Data output for G-channel port B side
91	DVccAD	—	5V	Digital power supply for A/D converter
93	VRB	O	1.9V	Bottom reference voltage output for A/D converter
95	AGNDADREF	—	GND	Reference voltage GND for A/D converter

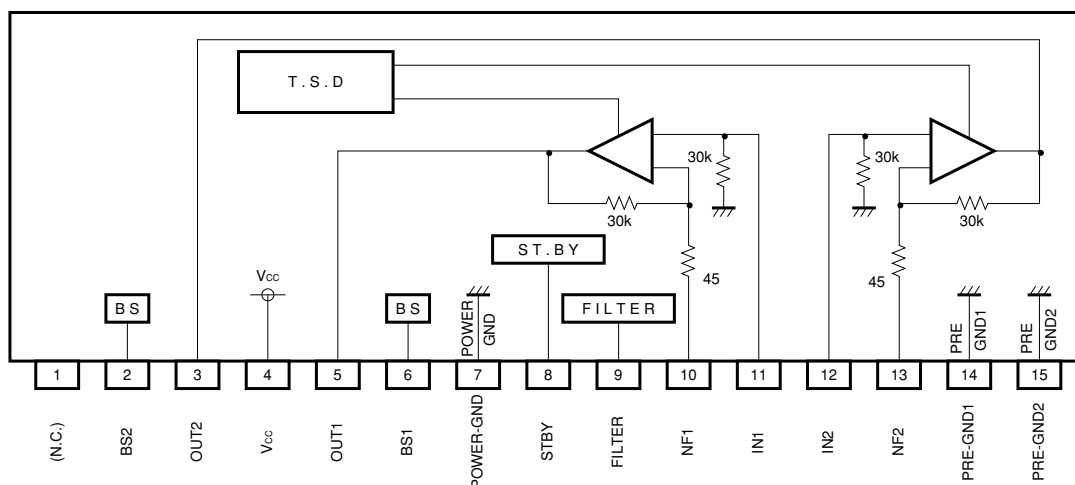
Pin No.	Symbol	I/O	Typical signal	Description
96	DVccPLLTTTL	—	5V	TTL output power supply for PLL
97	DGNDPLLTTTL	—	GND	TTL output GND for PLL
98	XCLK	O	TTL	Inverted CLK output
99	CLK	O	TTL	CLK output
100	1/2XCLK	O	TTL	Inverted 1/2CLK output
101	1/2CLK	O	TTL	1/2CLK output
103	DSYNC/ DIVOUT	O	TTL	DSYNC or DIVOUT signal output
104	UNLOCK	O	Open collector	Unlock signal output
105	SOGOUT	O	TTL	Output for SYNC ON GREEN
106	HOLD	I	TTL	Input for phase comparison disable signal
107	XTLOAD	I	TTL	Programmable counter reset setting
108	EVEN/ODD	I	TTL	Inverted pulse input of ADC sampling CLK
109	XCLKIN	I	PECL	Inverted CLK input for testing
110	CLKIN	I	PECL	CLK input for testing
111	SYNCIN1	I	TTL	Sync input 1
112	SYNCIN2	I	TTL	Sync input 2
113	CLPIN	I	TTL	Clamp pulse input
114	DVccPLL	—	5V	Digital power supply for PLL
115	DGNDPLL	—	GND	Digital GND for PLL
116	AVccVCO	—	5V	Analog power supply for PLL VCO
117	AGNDVCO	—	GND	Analog GND for PLL VCO
118	RC1	—	2.1V	External pin for PLL loop filter
119	RC2	—	2 to 4.5V	External pin for PLL loop filter
120	AVccIR	—	5V	Analog power supply for IREF
121	IREF	I	1.2V	Current setup
123	AGNDIR	—	GND	Analog GND for IREF
124	G/YIN1	I	—	G/Y signal input 1
125	AVccAMPG	—	5V	Power supply for G/Y amplifier block
126	G/YIN2	I	—	G/Y signal input 2
127	AGNDAMPG	—	GND	GND for G/Y amplifier block
128	G/YCLP	—	—	Clamp capacitor for brightness
129	B/CbCLP	—	—	Clamp capacitor for brightness
130	R/CrCLP	—	—	Clamp capacitor for brightness
132	SOGIN1	I	2.8V	SYNC ON GREEN signal input 1
133	B/CbIN1	I	—	B/Cb signal input 1

Pin No.	Symbol	I/O	Typical signal	Description
134	AVccAMPB	—	5V	Power supply for B/Cb amplifier block
135	SOGIN2	I	2.8V	SYNC ON GREEN signal input 2
136	B/CbIN2	I	—	B/Cb signal input 2
137	AGNDAMPB	—	GND	GND for B/Cb amplifier block
139	R/CrIN1	I	—	R/Cr signal input 1
140	AVccAMPR	—	5V	Power supply for R/Cr amplifier block
141	R/CrIN2	I	—	R/Cr signal input 2
142	AGNDAMPR	—	GND	GND for R/Cr amplifier block
143	G/YOUT	O	1.83V	Monitor pin for amplifier output signal
144	DAC TEST OUT	O	5V	DAC testing output for amplifier block control register
14, 102, 122, 131, 138	DPGND	—	GND	GND

# **BA5417 (MX AUDIO ASSY : IC8601)**

• Power Amp.

## • Block Diagram



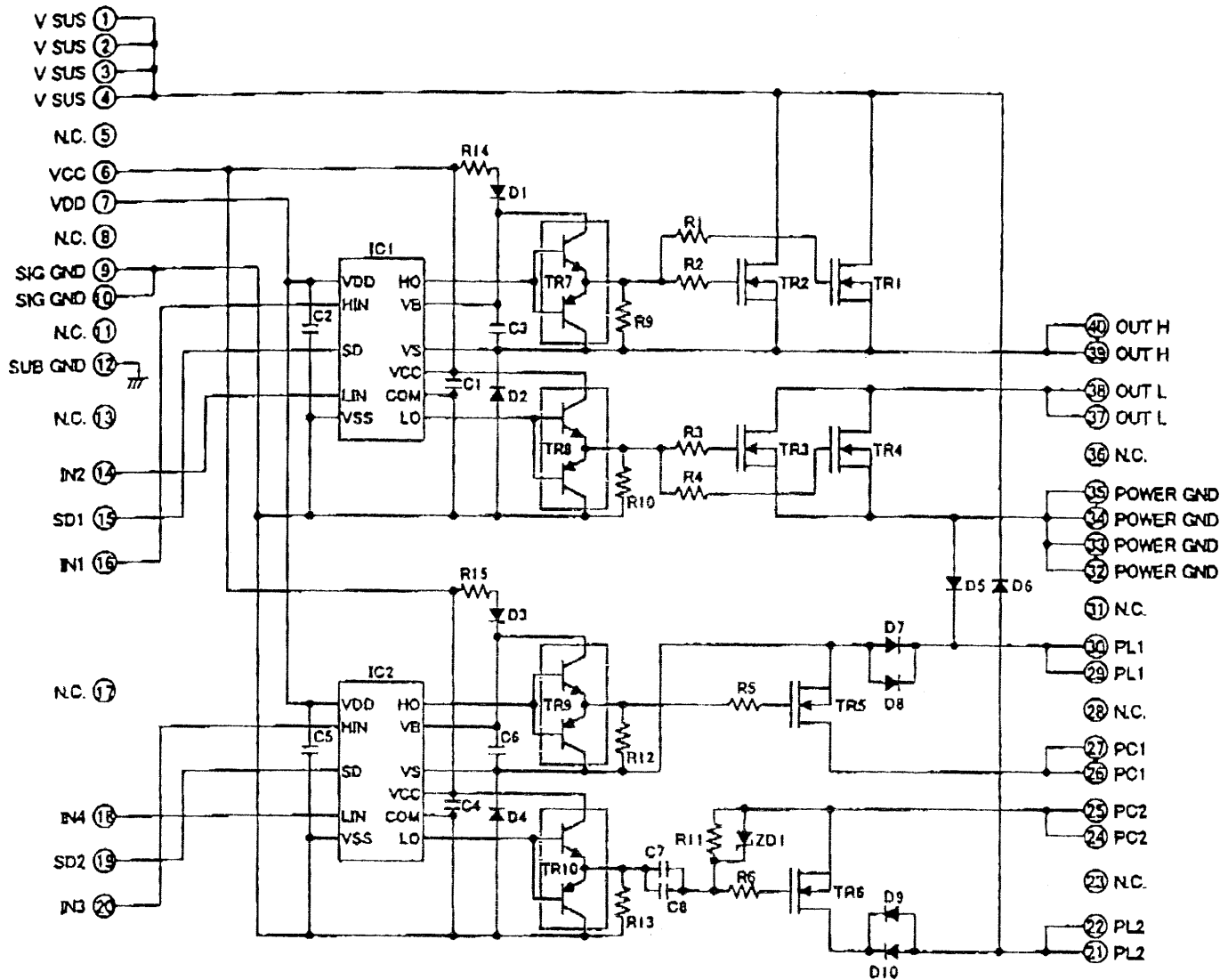
## • Pin Function

Terminal No.	Name of terminal	Description
1	(NC)	—
2	BS2	Boot-strap terminal 2
3	OUT2	Output terminal 2
4	VCC	Power source terminal
5	OUT1	Output terminal 1
6	BS1	Boot-strap terminal 1
7	POWER-GND	Power GND
8	STBY	Stand-by control terminal
9	FILTER	Ripple filter terminal
10	NF1	Feedback terminal 1
11	IN1	Input terminal 1
12	IN2	Input terminal 2
13	NF2	Feedback terminal 2
14	PRE-GND1	Small signal GND 1
15	PRE-GND2	Small signal GND 2

■ STK795-460 (X DRIVE ASSY : IC3200, IC3201)  
(Y DRIVE ASSY : IC2206, IC2214)

• PDP Pulse Module IC

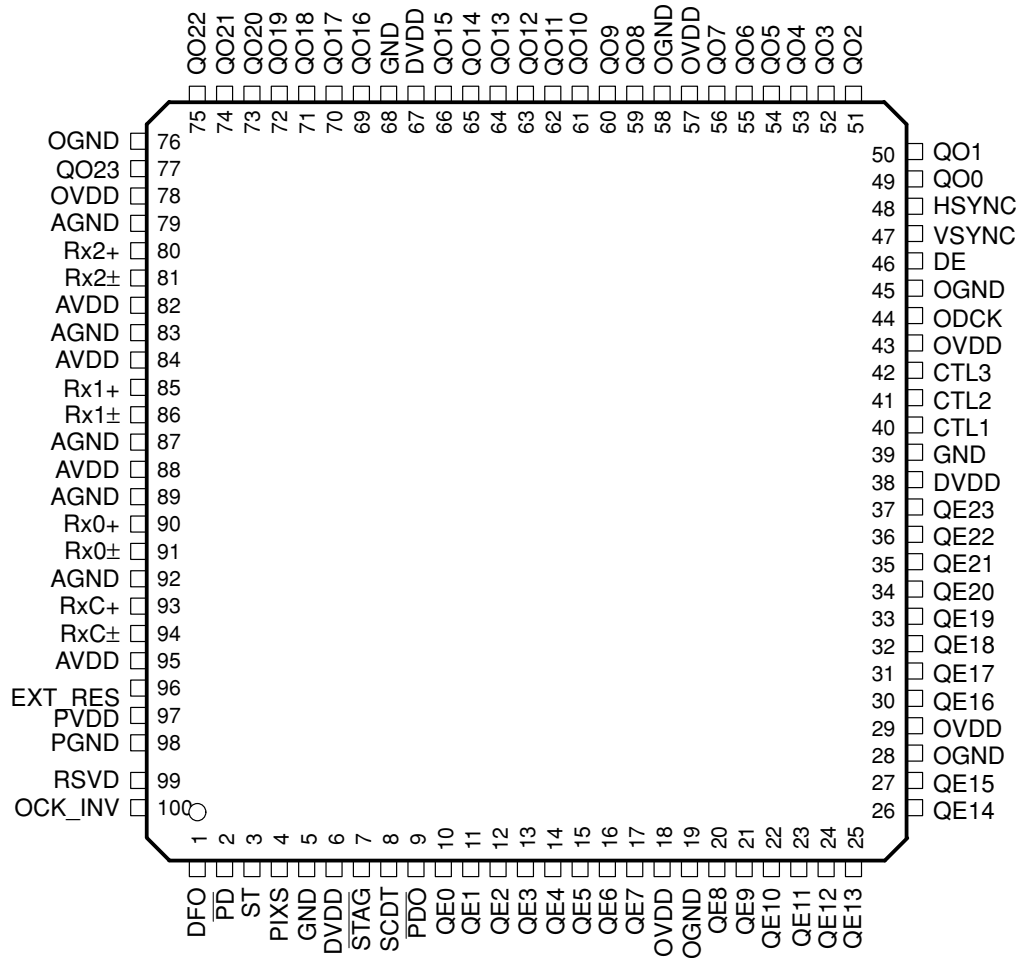
• Block Diagram



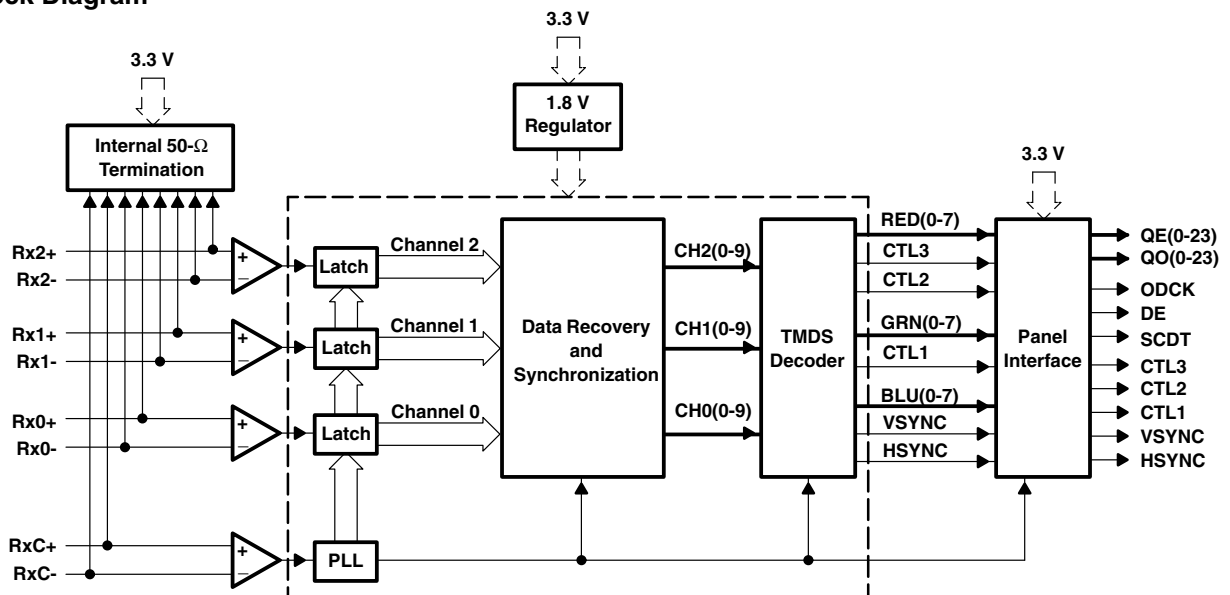
# ■ TFP201A (VIDEO SLOT ST1 ASSY : IC7401)

## • Panel Bus Receiver

## • Pin Assignment (Top View)



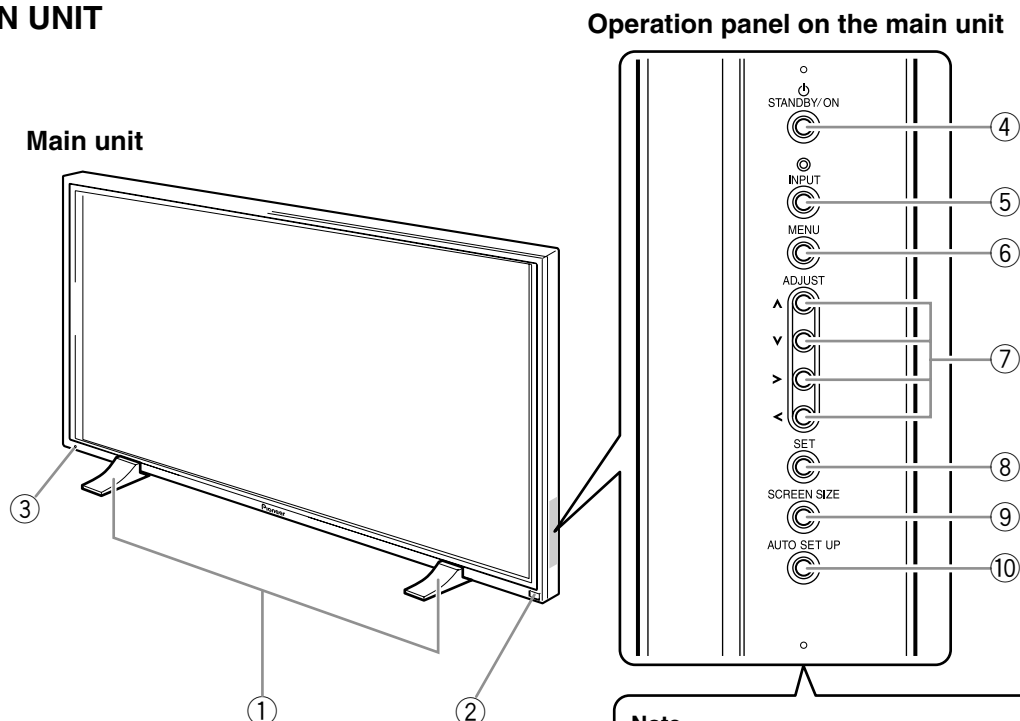
## • Block Diagram



## 8. PANEL FACILITIES AND SPECIFICATIONS

### 8.1 PANEL FACILITIES

#### ■ MAIN UNIT



#### Note

When optional speakers have been connected, the operation panel on the main unit will not be operable.

#### Main unit

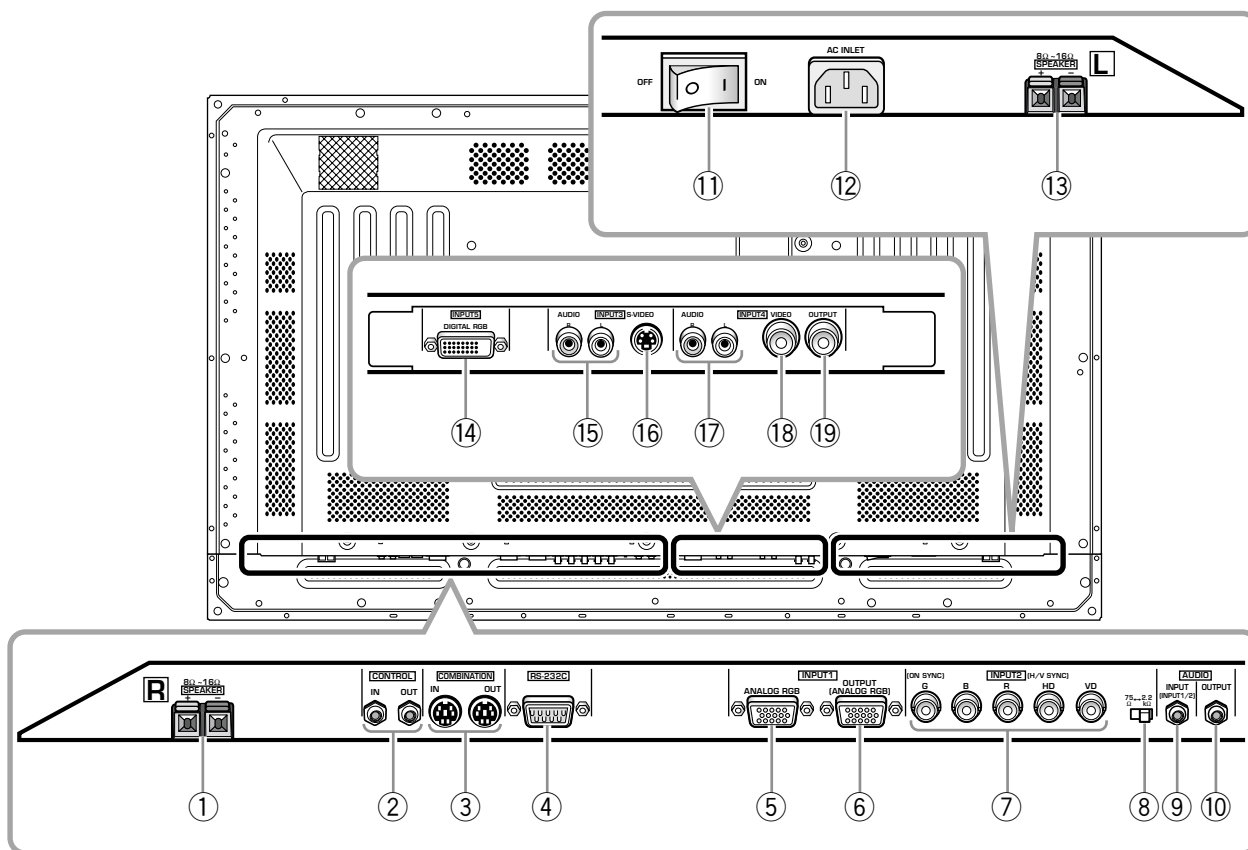
- ① **Display stand**
- ② **Remote control sensor**  
Point the remote control toward the remote sensor to operate the unit.
- ③ **STANDBY/ON indicator**  
This indicator is red during standby mode, and turns to green when the unit is in the operation mode. Flashes green when Power-Management function is operating. The flashing pattern is also used to indicate error messages.

#### Operation panel on the main unit

- ④ **STANDBY/ON button**  
Press to put the display in operation or standby mode.
- ⑤ **INPUT button**  
Press to select input.
- ⑥ **MENU button**  
Press to open and close the on-screen menu.
- ⑦ **ADJUST (▲/▼/▶/◀) buttons**  
Use to navigate menu screens and to adjust various settings on the unit. Usage of cursor buttons within operations is clearly indicated in the on-screen display.
- ⑧ **SET button**  
Press to adjust or enter various settings on the unit.
- ⑨ **SCREEN SIZE button**  
Press to select the screen size.
- ⑩ **AUTO SET UP button**  
When using computer signal input, automatically sets the POSITION and CLOCK/PHASE to optimum values.




## ■ CONNECTION PANEL



### Plasma Display [PDP-503CMX/PDP-503MXE] Section

The plasma display is provided with 2 video input connectors, 1 video output connector, audio input/output jacks and speaker terminals.


There are also CONTROL IN/OUT jacks for connection of PIONEER components with the  mark.

When this video card is installed on a plasma display, an additional three sets of video input connectors are provided (total five), together with one additional video output connector (total two).

#### ① SPEAKER (R) terminal

For connection of an external right speaker.  
Connect a speaker whose impedance is 8 -16 Ω.

#### ② CONTROL IN/OUT (monaural mini jacks)

For connection of PIONEER components that bear the  mark. Making CONTROL connection enables control of the plasma display as a component in a system.

#### ③ COMBINATION IN/OUT

**DO NOT MAKE ANY CONNECTIONS TO THESE TERMINALS.**

These terminals are used in the factory setup.

#### ④ RS-232C

**DO NOT MAKE ANY CONNECTIONS TO THIS TERMINAL.**

This terminal is used in the factory setup.

#### ⑤ INPUT1 (mini D-sub 15 pin)

For connection of components that have RGB or component output jacks such as a personal computer, DVD player, or external RGB decoder. Make sure that the connection made corresponds to the format of the signal output from the connected component.

#### ⑥ OUTPUT (INPUT1) (mini D-sub 15 pin)

Use the OUTPUT (INPUT1) connector to output the video signal to an external monitor or other component.

Note: The video signal will not be output from the OUTPUT (INPUT1) connector when the main power of this display is off or in standby mode.

#### ⑦ INPUT2 (BNC jacks)

For connection of components that have RGB or component output jacks such as a personal computer, DVD player, or external RGB decoder. Make sure that the connection made corresponds to the format of the signal output from the connected component.

## ⑧ Synchronizing signal impedance selector switch

Depending on the connections made at INPUT2, it may be necessary to set this switch to match the output impedance of the connected component's synchronization signal.

When the output impedance of the component's synchronization signal is above 75  $\Omega$ , set this switch to the 2.2 k $\Omega$  position.

## ⑨ AUDIO INPUT (Stereo mini jack)

Use to obtain sound when INPUT1, INPUT2 or INPUT5 is selected.

Connect this jack to the audio output connector of the device connected to the plasma display's INPUT1 or INPUT2, or to the audio output connector of the device connected to the video card's INPUT5.

## ⑩ AUDIO OUTPUT (Stereo mini jack)

Use to output the audio of the selected source component connected to the plasma display to an AV amplifier or similar component.

## ⑪ MAIN POWER switch

Use to switch the main power of the plasma display on and off.

## ⑫ AC INLET

A power cable is furnished with the plasma display; connect one end of the power cable to this connector, and the other end to a standard AC power source.

## ⑬ SPEAKER (L) terminal

For connection of an external left speaker. Connect a speaker that has an impedance of 8 -16  $\Omega$ .

## Video Card [PDA-5002] Section

The video card is provided with 3 video input connectors, 1 video output connector, and 2 audio input connectors.

## ⑭ INPUT5 (DVI-D jack)

Use to connect a computer.

**Note: This unit does not support the display of copyguard-protected video signals.**

## ⑮ AUDIO INPUT3 (RCA Pin jacks)

Use to obtain sound when INPUT3 is selected.

Connect these jacks to the audio output connectors of components connected to the video card's INPUT3.

Note: The left audio channel (L) jack is not compatible with monaural input sources.

## ⑯ INPUT3 (S-video jack)

For connection of components that have an S-video output jack such as a video deck, video camera, laser disc player, or DVD player.

## ⑰ AUDIO INPUT4 (RCA Pin jacks)

Use to obtain sound when INPUT4 is selected.

Connect these jacks to the audio output connectors of components connected to the video card's INPUT4.

Note: The left audio channel (L) jack is not compatible with monaural input sources.

## ⑱ INPUT4 (BNC jack)

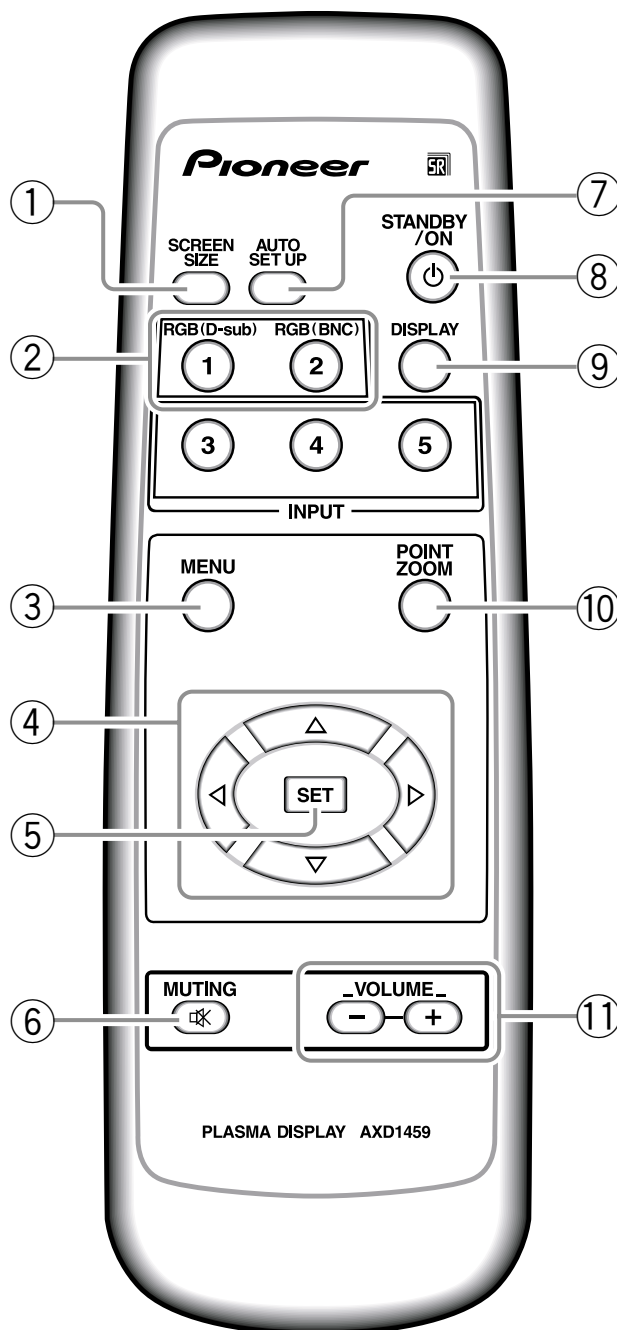
For connection of components that have a composite video output jack such as a video deck, video camera, laser disc player, or DVD player.

## ⑲ OUTPUT (INPUT4) (BNC jack)

Use the OUTPUT (INPUT4) jack to output the video signal to an external monitor or other component.

Note: The video signal will not be output from the OUTPUT (INPUT4) jack when the main power of this display is off or in standby mode.

## ■ REMOTE CONTROL UNIT



### ① SCREEN SIZE button

Press to select the screen size.

### ② INPUT buttons

Use to select the input.

### ③ MENU button

Press to open and close the on-screen menu.

### ④ ADJUST (▲/▼/▶/◀) buttons

Use to navigate menu screens and to adjust various settings on the unit.

Usage of cursor buttons within operations is clearly indicated at the bottom the on-screen menu display.

### ⑤ SET button

Press to adjust or enter various settings on the unit.

### ⑥ MUTING button

Press to mute the volume.

### ⑦ AUTO SET UP button

When using computer signal input, automatically sets the POSITION and CLOCK/ PHASE to optimum values.

### ⑧ STANDBY/ON button

Press to put the unit in operation or standby mode.

### ⑨ DISPLAY button

Press to view the unit's current input and setup mode.

### ⑩ POINT ZOOM button

Use to select and enlarge one part of the screen.

### ⑪ VOLUME (+/-) buttons

Use to adjust the volume.

## ■ INSTALLING THE VIDEO CARD

Confirm the following before installing this video card:

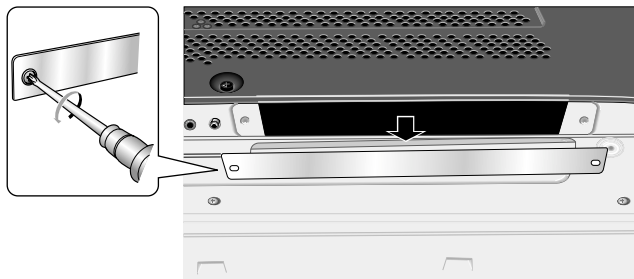
- Disconnect the plasma display from computer or other components.
- Disconnect the plasma display's power cord from its outlet.

### Installation Notes:

- When opening the installation cover, take care not to drop screws or other objects in the opening. Objects dropped inside the display may cause damage or malfunction.
- When installing the video card, if the plasma display is laid with its screen side facing down, the work surface should be flat and level, and either the packing material, a blanket, or other soft material should be spread on the work surface first to protect the screen. Take care to prevent scratches or other damage to the unit from tools or other objects. Never rest the display on a surface in such a way that weight or pressure is placed only on the screen surface.
- This video card has been designed for exclusive use with the Pioneer Plasma Display PDP-503CMX/PDP-503MXE. Do not attempt unauthorized modifications or alterations since malfunction or damage may result.
- Take care not to modify or damage the card's internal devices in any way.
- Before installation, take precautions to eliminate static electricity on your body. Do not touch the card's circuitry or devices.
- This device has not been designed to allow reinstallation or removal; after the card has once been installed on the plasma display, do not attempt to remove it since damage may result.

### Installation

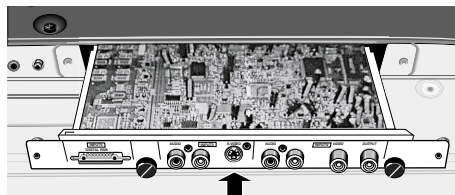
- 1 Remove the protective cover over the video card slot on the plasma display's terminal panel.**



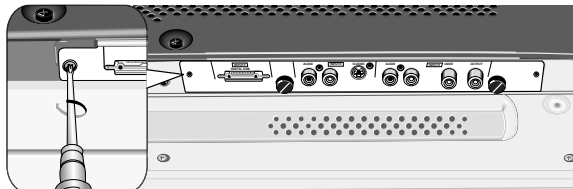
- 2 Insert the video card gently and evenly in alignment with the two rails (white) visible inside the installation port.**

#### Note

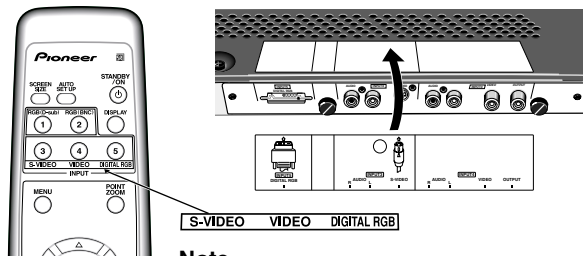
Be very careful when inserting the card. Insert straight! The card or display may be damaged if the card is inserted crooked or with excessive force.



- 3 After inserting the video card all the way into the slot, confirm that it is seated securely, then use the screws removed in step 1 to secure the card in place.**



- 4 Affix the accessory connector indicator label to the plasma display, and affix the remote control unit label to the remote control unit furnished with the plasma display.**

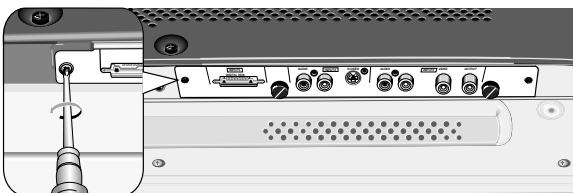


#### Note

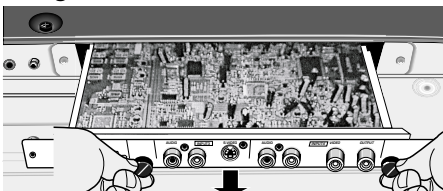
Use a soft cloth to gently wipe any dust from the surface before affixing the label.

### Video Card Removal (In principle, removal of the video card should not be attempted).

- 1 Remove the two screws holding the video card.**



- 2 Holding the inside tabs, pull the video card out straight.**

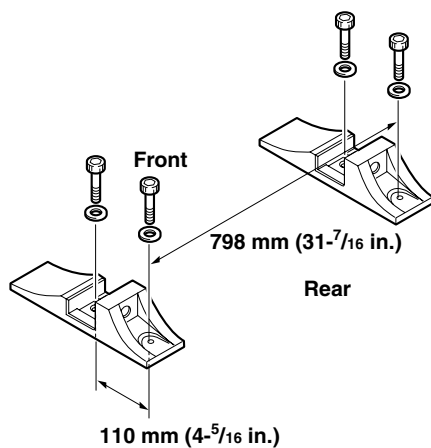


## ■ INSTALLATION OF THE UNIT

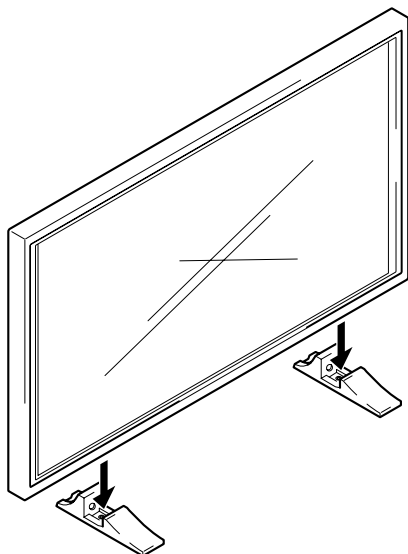
### Installation using the supplied display stand

Be sure to fix the supplied stand to the installation surface. Use commercially available M8 bolts that are 25 mm longer than the thickness of the installation surface.

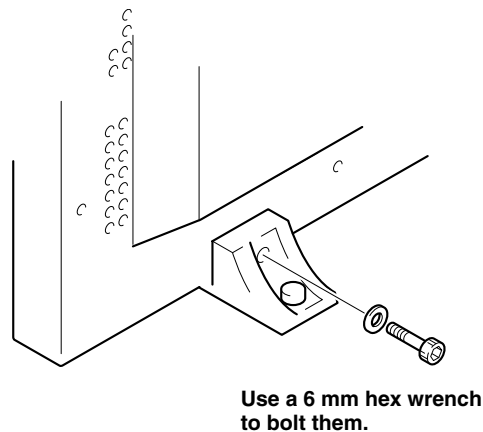
- 1 Fix the supplied stand to the installation surface at each of the 4 prepared holes using commercially available M8 bolts .



- 2 Set this unit in the stand.



- 3 Fix this unit using the supplied washer and bolt.



### ⚠ CAUTION

Because this unit weighs about 88 lbs 3 oz (about 40 kg) and the lack of depth makes it fairly unstable, please use 2 people or more when packing, carrying or installing.

## Installation using the optional PIONEER stand or installation bracket

- Please be sure to request installation or mounting of this unit or the installation bracket by an installation specialist or the dealer where purchased.
- When installing, be sure to use the bolts provided with the stand or installation bracket.
- For details concerning installation, please refer to the instruction manual provided with the stand or installation bracket.

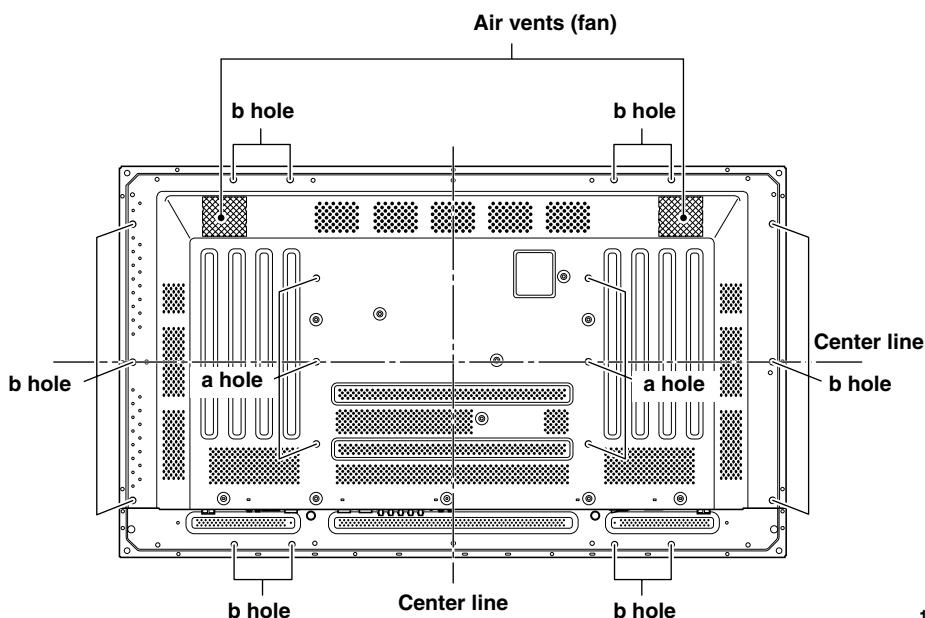
## Installation using accessories other than the PIONEER stand or installation bracket (sold separately)

- When possible, please install using parts and accessories manufactured by PIONEER. PIONEER will not be held responsible for accident or damage caused by the use of parts and accessories manufactured by other companies.
- For custom installation, please consult the dealer where the unit was purchased, or a qualified installer.

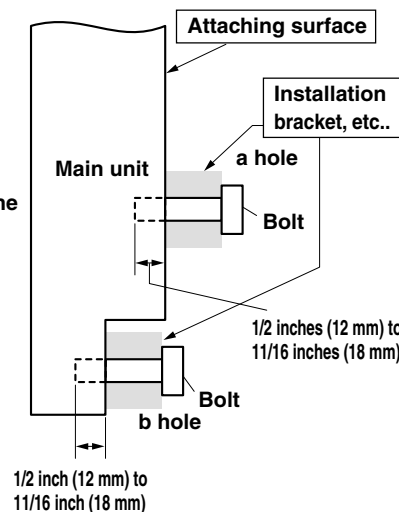
## Wall-mount installation of the unit

This unit has been designed with bolt holes for wall-mount installation, etc.. The installation holes that can be used are shown in the diagram below.

- Be sure to attach in 4 or more locations above and below, left and right of the center line.
- Use bolts that are long enough to be inserted 1/2 inch (12 mm) to 11/16 inch (18 mm) into the main unit from the attaching surface for both a holes and b holes. Refer to the side view diagram below.
- As this unit is constructed with glass, be sure to install it on a flat, unwarped surface.



Rear view diagram



Side view diagram

### CAUTION

To avoid malfunction, overheating of this unit, and possible fire hazard, make sure that the vents on the main unit are not blocked when installing. Also, as hot air is expelled from the air vents, be careful of deterioration and dirt build up on rear surface wall, etc..

### CAUTION

Please be sure to use an M8 (Pitch = 1.25 mm) bolt. (Only this size bolt can be used.)

### CAUTION

Because this unit weighs about 88 lbs 3 oz (about 40 kg) and the lack of depth makes it fairly unstable, please use 2 people or more when packing, carrying or installing.

### CAUTION

This unit incorporates a thin design. To ensure safety if vibrated or shaken, please be sure to take measures to prevent the unit from tipping over.

## 8.2 SPECIFICATIONS

## ■ PLASMA DISPLAY (PDP-503CMX and PDP-503MXE)

## General

Light emission panel .....	50 inch plasma display panel
Number of pixels .....	1280 x 768
Power supply .....	AC 100 - 120 V, 50/60 Hz (PDP-503CMX)
Power supply .....	AC 100 - 240 V, 50/60 Hz (PDP-503MXE)
Rated current .....	3.8 A - 3.1A (PDP-503CMX)
Rated current .....	3.8 A - 3.1A (PDP-503MXE)
Standby power consumption .....	1 W
External dimensions .....	1218 (W) x 714 (H) x 98 (D) mm
	47-31/32 (W) x 28-1/8 (H) x 3-7/8 (D) in.
(including display stand)	
.....	1218 (W) x 737 (H) x 300 (D) mm
	47-31/32 (W) x 29-1/32 (H) x 11-13/16 (D) in.
Weight .....	38.9 kg (85 lbs. 12 oz)
(including display stand).....	39.5 kg (87 lbs. 1 oz)

## Input/output

## Video

INPUT 1

Input	Mini D-sub 15 pin (socket connector) RGB signal (G ON SYNC compatible) RGB ... 0.7 V <sub>p-p</sub> /75 Ω/no sync. HD/CS, VD ... TTL level /positive and negative polarity /2.2 kΩ G ON SYNC ... 1 V <sub>p-p</sub> /75 Ω/negative sync. *Compatible with Microsoft's Plug & Play (VESA DDC1/2B)
Output	Mini D-sub 15 pin (socket connector) 75 Ω/with buffer

INPUT 2

**Input** BNC jack (x5)  
 RGB signal (G ON SYNC compatible)  
 RGB ... 0.7 V<sub>p-p</sub>/75 Ω/no sync.  
 HD/CS, VD ... TTL level  
 /positive and negative polarity/  
 75 Ω or 2.2 kΩ  
 (impedance switch)  
 G ON SYNC ...  
 1 V<sub>p-p</sub>/75 Ω/negative sync.

## Audio

**Input** AUDIO INPUT (for INPUT 1/2)  
Stereo mini jack  
L/R ... 500mVrms/more than 10 k $\Omega$

**Output** AUDIO OUTPUT  
Stereo mini jack  
L/R ... 500mVrms (max)/less than 5 k $\Omega$

SPEAKER  
L/R ... 8 – 16  $\Omega$ /2W +2W (at 8  $\Omega$ )

## Control

RS-232C ... D-sub 9 pin (pin connector)  
COMBINATION IN/OUT  
... Mini DIN 6 pin (x2)  
CONTROL IN/OUT ... monaural mini jack (x2)

## Accessories

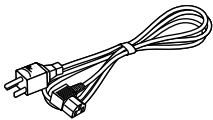
Power cord .....	1 (PDP-503CMX Only)
Remote control unit .....	1
Remote control unit holder .....	1
AA (R6) batteries .....	2
Cleaning cloth .....	1
Speed clamps .....	2
Bead bands .....	2
Warranty .....	1 (PDP-503CMX Only)
Operating Instructions .....	1
Display stands .....	2
Washers .....	2
Hex hole bolts (M8X40) .....	2
CD-ROM (information files) .....	1
Ferrite core .....	(PDP-503MXE Only)
Cable tie .....	(PDP-503MXE Only)

- Due to improvements, specifications and design are subject to change without notice.


PDP-503CMX, PDP-503MXE, PDA-5002

● Accessories

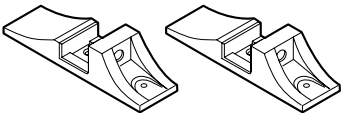
- Power Cord (ADG1178)



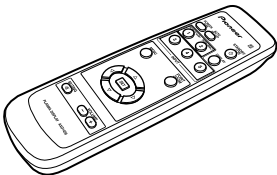
- Cleaning Cloth (for wiping front panel) (AED1197)



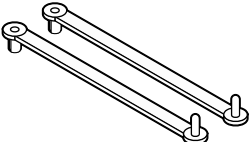
- Display Stand (x2) (AMR3264)




- Remote Control Unit (AXD1459)



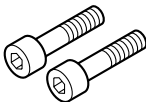
- Binder Assy (AEC1758)
- Speed Clamp (x2)



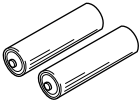
- Washer (x2) (WB80FZB)



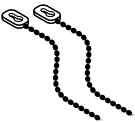
- Hex Hole Bolts (x2) (SMZ80H400FZB)



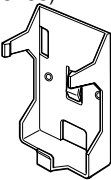
- Dry Cell Battery (R6P, AA)



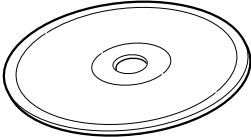
- Bead Bands (x2)



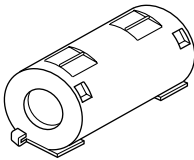
- Remote Control Unit Holder (AMR3268)




- CD-ROM (Information files) (AEX1027)



- Ferrite Core (ATX1031)



- Cable Tie



PDP-503MXE Only



■ VIDEO CARD [PDA-5002]

**General**

External dimensions ..... 243.8 (W) x 23.6 (H) x 144 (D) mm  
9-5/8 (W) x 29/32 (H) x 5-11/16 (D) in.  
Weight ..... 0.3 kg (0.7 lbs.)  
Operating temperature range ..... 0 to 40 °C (32 to 104 °F)

**Input/output**

**Video**

**INPUT 3**

(Input)

S terminal (Mini DIN 4 pin)  
• Y/C saparate video signal  
Y ... 1 Vp-p/75 Ω/negative sync.  
C ... 0.286 Vp-p/75 Ω (NTSC)  
0.3 Vp-p/75 Ω (PAL)

**INPUT 4**

(Input)

BNC jack  
• Composite video signal  
1 Vp-p/75 Ω/negative sync.

(Output)

BNC jack  
75 Ω /with buffer

**INPUT 5**

(Input)

DVI-D 24-pin connector  
• Digital RGB signal (DVI compliant TMDS signal)  
\* INPUT 5 supports Microsoft "Plug & Play" (VESA DDC 2B) standards.

**Audio**

(Input)

AUDIO INPUT (for INPUT 3)  
Pin jack (x2)  
L/R ... 500mVrms/more than 10 kΩ

AUDIO INPUT (for INPUT 4)  
Pin jack (x2)  
L/R ... 500mVrms/more than 10 kΩ

**Accessories**

Label for remote control unit .....	1
BNC/Pin conversion adaptor .....	1
Connector indicator label .....	1
Operating Instructions .....	1
Warranty .....	1

- Due to improvements, specifications and design are subject to change without notice.

● **Accessories**

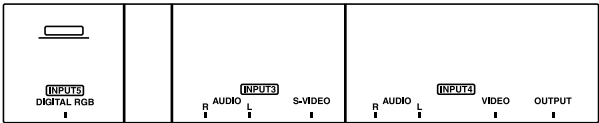
- Label for Remote Control Unit (AAX2861)

S-VIDEO VIDEO DIGITAL RGB

- BNC/Pin Conversion Adaptor (AKX1052)



- Connector Indicator Label (AAX2854)



- Screws × 2 (Accessory screws for installing video card) (BMZ30P060FZK)

